THE BUILDER

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WHY A ROYAL FINE ART COMMISSION?

THE Royal Fine Art Commission has just issued its Ninth Report, a summary of which was given in our issue for July 28. "Why," it may well be asked, "a Royal Fine Art Commission?" What sort of case can be made out for its continued existence now that the matters which it was set up to deal with are so fully controlled by planning authorities under the Town and Country Planning Act of 1947? The Commissioners themselves seem to have some doubts on the subject for in the course of their Report they observe that "The question of the appropriateness of new buildings to their architectural surroundings and, indeed, the whole quality of their design, are now matters on which the planning authority may exercise its powers of control under the Act. The exercise of these powers can help to raise the general standard of architecture; they can also go far to stultify creative energy and imagination, and your Commissioners note with some sympathy the fears on this score that are beginning to be expressed in some quarters. They believe, however, that at this stage the best contribution they can themselves offer towards fulfilling the real purpose of the Act is to make their advice readily available to the Ministry of Town and Country Planning and to those local planning authorities who seek it."

Is the Royal Fine Art Commission therefore redundant? To answer the question a few facts of recent history must be recalled. It was the vulgarity of much of the so-called architecture that was produced in this country during the nineteenth century and after, and the general low standard of civic design and planning that started the agitation some forty or more years ago for a Ministry of Fine Art. The clamour was officially ignored, but in 1924, under the first Labour Government, the Royal Fine Art Commission was set up with advisory functions, i.e., "to inquire into such questions of public amenity or of artistic importance as may be referred to them from time to time by any of our Departments of State . . . and to give advice on similar questions when so requested by public or quasi-public bodies . . .", powers which were later enlarged to include calling the attention of Departments of State and other bodies "to any project or development which . . . may appear to affect amenities of a national or public character. . . ."

There were many who held that the powers of the Commission should be mandatory, but dictatorships have never been popular in this country, and the Commission's powers remained advisory.

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THIS WEEK'S NEWS

THE SECOND ANNUAL REPORT of the National Corporation for the Care of Old People draws attention to the administrative gap between the National Health Service Act and the National Assistance Act by which a certain category of old people are apparently the responsibility of none, being on the border line between health and sickness. In a contributed article the excellent work done by local authorities in some localities by the provision of half-way houses for the aged is described p. 180

A REPORT of the appropriate committee of the L.C.C. advises against the creation of a regional planning authority with executive powers for the area covered by the London Regional Plan. p. 181

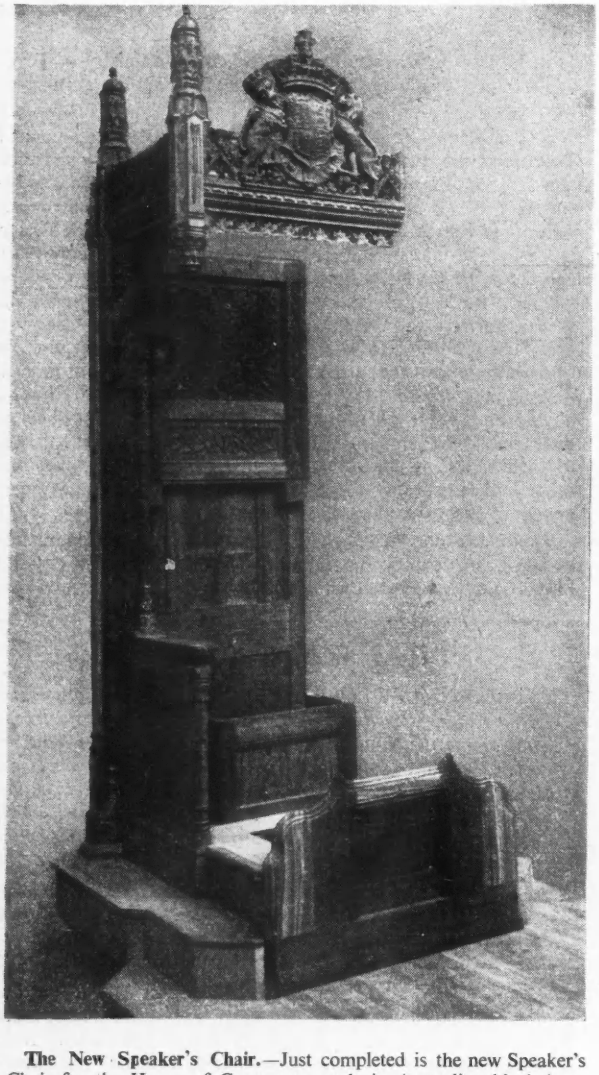
MR. S. COLWYN FOULKES, M.Arch., F.R.I.B.A., was the architect for the Housing Scheme at Llanrwst, N. Wales, which has been awarded the Ministry of Health bronze medal. Illustrations and extracts from the architect's report to the awards committee are given on p. 183

THE NEW OCEAN TERMINAL BUILDING at Southampton Docks, designed by J. H. Jellett, Docks Engineer to the Southern Region of the Railway Executive, is illustrated on p. 186

A PLEA for the greater use of television as a means of encouraging the public in the appreciation of good architecture was made by Mr. Noel Carrington at the seventh annual meeting of the Council for Visual Education. p. 195

TO HELP those seeking a suitable course of study in one of the many branches of work connected with the building industry, the L.M.B.A. has issued a memorandum which gives information of the building courses available at technical colleges and schools in the London region. p. 199

Objection was raised even to these by the all-out libertarians, who held that the arts can flourish only under conditions of complete freedom. This, of course, is only partially true, for freedom allows not only a Mackintosh or a Lutyens to arise, but others—who shall be nameless. It was these others whose activities needed to be controlled in the interests of the community, as they now are under the Town and Country Planning Act. Any sort of control is, however, difficult to apply fairly. At a time when a universally approved standard of excellence has been established, as in the main it was in this country during the eighteenth century, it is easy enough to pass judgment on the quality of a design : when there are no such standards, as at present, it is a very different matter. Mr. Frank Lloyd Wright was not so far off the mark when he said recently that to-day no one can tell a good building from a bad one. Obviously, therefore, control of design has to be very carefully exercised, and it says much for the good sense of those of our planning authorities who have set up independent advisory panels to help them in their task.



The New Speaker's Chair.—Just completed is the new Speaker's Chair for the House of Commons, made in Australian black bean timber, which was a gift from Australia. The work comprised woodmill machining, joinery work, wood carving, and wax polishing, and has taken six months to execute ; it will be placed in position in the new House shortly. The chair is supported upon a platform of three steps and there is a foot board at the House end of the upper platform against which is placed the kneeler. The panel is finely carved and the whole of the carving is in accord with Sir Giles Scott's Gothic treatment. The carved panel to the back immediately above the upholstery, comprising the Sceptre and Mace, is of special interest, also the carved cresting to the upper part of the chair. The two rear posts and the front posts are surmounted by finials and pendants. Four woodwork machinists, four joiners and eight wood-carvers have been employed on the work, which was executed by Messrs. Martyn's, Ltd., of Cheltenham. The outer base moulding to the lower platform of the chair is a gift from Canada.

Nevertheless, the fear remains—and that there is some basis for it is shown by the decisions of some of the advisory panels that functioned under earlier legislation between the wars—that controls may, as the Commissioners put it, " go far to stultify creative energy and imagination." The Royal Fine Art Commission itself is in a sense a microcosm of the differences and difficulties of the times, for its membership includes men of widely differing outlook on the arts, ranging from the traditional to the experimental. It is right that it should be so, for it ensures that all points of view shall receive due consideration and some measure of agreement be reached on reason alone. Thus the Commission, when consulted by the London County Council on the design (a very progressive one, as our readers may recall) for the new headquarters of the Trades Union Congress, advised against its erection on the proposed site in Great Russell-street : " a site in many ways inadequate for a national institution of this importance, and complicated by the fact that the other half of the block is occupied by Lutyens's Y.W.C.A. building. No acceptable alternative site could, however, be found, and the somewhat cramped and incongruous appearance of the new building had, therefore, in the opinion of the Commission, to be accepted, subject again to certain minor adjustments in the design." In another section of the Report the Commission, again notwithstanding its mixed membership, is able to say that " Perhaps the most important new building at present under construction is the Royal Festival Hall, where the Architect to the London County Council and his deputy have been able to liberate their design from the meaningless formulæ that still encumber so much official architecture." Other examples of the Commission's reasonable attitude towards current activities may be quoted from this Report, i.e., its welcome to the decision of the L.C.C. to place the responsibility for its own housing work once again in the hands of its Architect ; its encouragement of the adoption of an improved alternative design for an office block in New Oxford-street ; its recommendation of the appointment of a consultant for a new building in Knightsbridge, which was accepted ; its watchful interest in the development by private owners of a large site in the main shopping street of Southampton within the lines of a general design by a consultant ; its concern for the design of office blocks now being erected by private enterprise in London and elsewhere for lease to the Government—buildings which, as the Report dryly observes, " constitute a major contribution—at least in point of size—to the architecture of their respective towns," and which " should be given a greater measure of architectural consideration than has so far been the case."

These examples, to say nothing of the large number of other matters on which the Commission's advice was sought and given, show that, notwithstanding the mandatory powers which Parliament has entrusted to planning authorities, there is still wide and useful scope for an independent advisory body like the Royal Fine Art Commission, composed, as it is, of men of distinction and wide experience in their respective professions. Among cultural bodies it is a sort of æsthetic House of Lords, lacking compulsive power but capable of giving shrewd advice and guidance to those who seek them, and, equally important, on occasion to those who do not. So long as the Commission sets its face against the "stultification of creative energy and imagination" it will be doing invaluable service to the arts and may be assured of the support of all who hold that if complete freedom is not possible the lighter the shackles the better.

NOTES AND NEWS

Order out of Chaos

THE Bishops Bridge-road housing scheme, designed by Messrs. Drake and Lasdun for the Paddington Borough Council, would seem at last to point the way to an informed approach to one of the most difficult problems besetting architects to-day.

In the designation of this area (in Victorian times it was a wealthy residential suburb), for development as an urban community to house 2,362 persons, Paddington Council has shown commendable foresight, and in designing the layout the architects have taken great care to make the most of the existing trees and provide some fine open spaces.

This area to-day is notable for its overcrowding and general atmosphere of having seen better days. Its proximity to Paddington Station hardly helps matters and the once gracious residential suburb has deteriorated into an ill-conditioned ghost of the past.

The scheme (upon which work has started) attempts, with creditable courage, to break new ground. The particular area being developed is well served with churches, shops, cinemas, etc., but new buildings on the site will include primary and nursery schools, laundries, public-houses, garages, shops, etc. Such related planning can only be a good thing in a district which has lost most of the coherence it ever had. . . . Some people will regret the break from the Victorian character in the design (the buildings are mainly of reinforced concrete construction with binding cross walls and panel external walls), but a certain sensitivity towards the past has, in fact, been achieved in the patterning of the elevations, and variety will be obtained by the interchange of patterning, colour and texture.

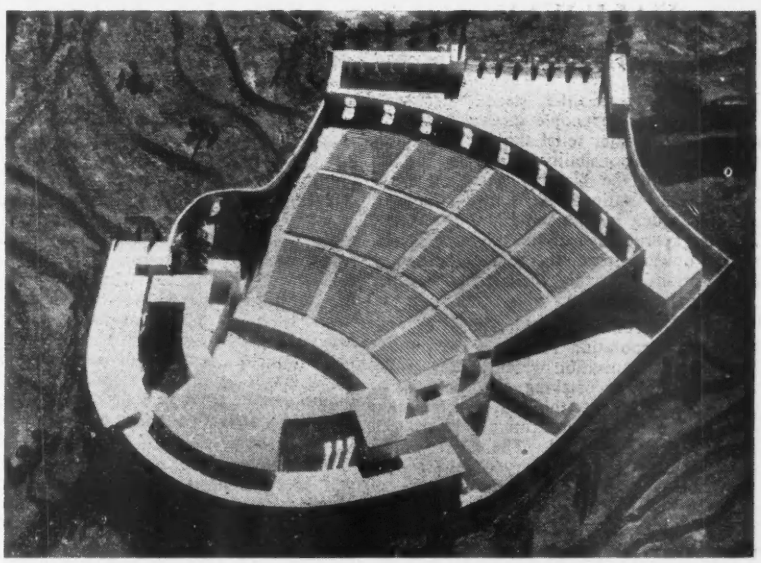
In view of its central position, this project must necessarily become something of a landmark in the contemporary development of London. It is early yet to say whether the result will add lustre on every count to the cause of contemporary design theory; nevertheless the scheme has every possibility of setting a new standard for future urban development.

International Building Documentation.

THE International Council for Building Documentation will hold a general assembly in Paris from October 23-31 next. This organisation has been set up to meet the need for technical documentation, and aims to better the information and documentation offered to building technicians all the world over, thus facilitating an efficient international co-operation through the exchange of documentation between the various national and international organisations concerned. All countries participating in the work of the United Nations are eligible, and the provisional committee has M. A. Marini as president, the U.K. representative being Mr. B. Agard Evans. A full and interesting programme has been arranged, closing with a banquet at the Cercle Interallié, under the presidency of the Minister of Reconstruction and Town Planning. The headquarters are at 33, rue Jean Goujon, Paris, 8.

A New Experiment in London.

IN "The Magic Touch," the C.O.I. monthly release for July, there are scenes of a new experiment that is taking place in London. Surplus heat produced at Battersea Power Station is used to heat water, which is then pumped across the Thames in a tunnel and stored in a huge accumulator on the site of a block of flats. This accumulator supplies central heating and hot water to every flat on the site, saving labour, saving dirt and saving precious coal. If it works at Battersea, there is no reason why eventually it should not work in every British city.



A "FREEDOM FORUM," JERUSALEM. This is a model of the giant forum "For Freedom In All Its Forms" to be built on Romema Hill, near Jerusalem. The new structure will serve as a centre for Jewish and International Conventions and Art Festivals and will have an assembly hall seating 3,500 and an amphitheatre accommodating 10,000 Completion of the assembly hall is planned for Autumn, 1951, in time for a 15-Nation "Fight the Desert Exhibition," backed by UNESCO to publicise World Land Reclamation and Fertilisation Projects.

From the Ground Up.

TO-DAY we are investing one-fifth of all our resources in the making of a new Britain. "From the Ground Up," the Central Office of Information monthly film release for August, shows how this money is being spent to rebuild, modernise and expand the whole vast productive machine by which we live. The engineering industries need iron and steel, and the film shows the new rolling mills, smelting shops and blast furnaces which are being built in South Wales, Lincolnshire and Clydeside, to give them these metals. The railways are being improved, too. At Southampton, for instance, is the new passenger terminal to make things more convenient for tourists. In the cities we need new flats, hospitals, schools and offices. Gradually we are getting them, but it takes manpower and materials. For the industries, too, the future looks promising. The engineers believe that by 1952, as a result of the new generating stations which are being built everywhere, there will be enough power for everybody all the time.

Professional Announcements.

MESSRS. GRAHAM DAWBARN AND R. F. LLOYD JONES have taken into partnership MR. FRANK RUTTER, as from April 1, 1950. The associate members of the firm are Messrs. Alick Low, Herbert Wilson and Raymond Pidgeon.

MESSRS. LUBETKIN & SKINNER, formerly of 115, Mount-street, W.1, have taken Mr. D. C. Bailey into partnership and will in future practise as Messrs. Skinner, Bailey and Lubetkin, at 188, Piccadilly, W.1 (tel. Grosvenor 6795/6).

MESSRS. WILSON COLBECK AND PARTNERS, quantity surveyors, wish to announce that on August 8 they moved from No. 97, Old Brompton-road, to larger premises at No. 86, Old Brompton-road, S.W.7. Telephone Nos. (Kensington 9266, 8871/2) are unchanged.

MONTAGUE EVANS AND SON, of London, announce that as from August 1, 1950, they have taken into partnership MR. DAVID STEVEN, L.R.I.B.A., and MR. CONRAD RICHARD MALLETT, A.R.I.C.S., A.A.I. The head office of the firm at 21, Brunswick-square, W.C.1, and the branch offices at 12, Doughty-street, W.C.1, and 58, London-road, Redhill, Surrey, will continue to function as hitherto. The firm have, however, opened a special rating department at 441, Bloomsbury-square, W.C.1, to deal with rating valuations under the Local Government Act, 1948.

COMING EVENT

Monday, August 14.

ROYAL INSTITUTE OF PAINTERS.—Opening of seventh summer exhibition. Galleries of the Royal Institute, 195, Piccadilly, W.1. 10 a.m.

FROM "THE BUILDER" OF 1850

Saturday, August 10, 1850.

COMPETITION IN THE BUILDING TRADE.—Competition in the Building Trade has reached a lamentable height, and I think you will agree with me that something should be done to stop its further progress. Trade is truly in a wretched state: men are at a loss to know how to act for provision for themselves and families, so voracious and cruel is the evil with which they have to contend. For a builder to live and be honest nowadays is quite a farce; if inclined to do so, the public will not let him. Competition they must have. Cheapness they will catch at, let it prove ever so bitter or dear. To be in the building trade you must scheme, contrive, turn, twist, beat down the merchant who supplies you, buy your goods no matter from whom, whence they come or how obtained; the workmen in your employ must be ground down to the last extremity, heedless of the families they have to support; in fact, there must be no scruples of conscience or tenderheartedness, provided you can find the means to do work at a lower rate than your neighbour, and thereby satisfy a deluded public by it being said you are a cheap man. . . [Extract from a letter.]

HALF-WAY HOUSES FOR THE AGED

Bridging the Gaps Between the Welfare Acts

IN recent years the steadily growing number of old people in our midst has thrown into greater relief the work of those sharing the responsibility for caring for the aged. Both the National Health Service Act and the National Assistance Act have achieved much in lightening this work, but with the average age of the old people ever on the upward trend, the role of voluntary organisations in this field has become increasingly important.

In the second annual report of the National Corporation for the Care of Old People, an organisation which makes grants to institutions undertaking or promising to undertake work of this nature, attention is drawn to the administrative gap between the two Acts mentioned. The report points out that there is a category of old people who are apparently the responsibility of none, being on the border line between health and sickness, and urges that all, in sickness, health, or on the border line, should receive without delay or argument about responsibility, the treatment and care they need.

Recently, active steps to meet this situation have been taken in a few localities by the setting up of "half-way houses"—places where medical and nursing treatment may be continued after patients have left hospital and before they return to their own homes or old people's hostels. These old people are not ill in the hospital sense, but are not fit enough to be far removed from some degree of nursing care. Removal from the geriatric unit of a hospital to a half-way house would ensure continued treatment for those suffering from the usual recurring ailments of old age—chronic bronchitis, rheumatic diseases such as arthritis, high blood pressure, etc. Such patients would stay at the half-way house for a week or two, but others might be permanent residents.

The essence of half-way house projects is that they shall provide the necessary services to the patients at a more economical cost than would be the case if they occupied a hospital bed. Before the war, it is estimated, the running costs of such an establishment would have been about £3 per week per patient. Now, owing to State rates for staff, etc., this figure more nearly approaches £15.

Potential saving, however, is not only confined to finance. A half-way house, it is considered, may be satisfactorily organised and run in such a way that a saving of up to 60 per cent. in nursing staff is achieved. At the present time this is an important factor.

A few months or so ago the King Edward Fund for London purchased a property in Roehampton-lane, London, for conversion into a half-way house. In many respects the house is eminently suitable for the purpose envisaged, existing accommodation being such that by careful rearrangement of rooms and the removal of certain partition walls, it will be possible to provide a central dining room and a number of bedrooms to be occupied by two, three or four patients, about 26 in all.

The conversion of a large stable building will give the necessary accommodation for nursing staff and, apart from some rearrangement of bathroom and lavatory accommodation, the only other major work required to be done is the provision of a small passenger lift—large enough to carry a wheel-chair however—to serve upper floors. The internal arrangement of the house is such that it will be possible to provide this in the entrance hall.

The house possesses attractive gardens at the front and rear, part of which is laid out formally, making admirable places in which residents may sit in the open air and enjoy the sunshine. At the side is a fair-sized kitchen garden, which will serve the dual purpose of giving the residents an active interest in its maintenance and providing vegetables and fruit for the kitchen.

Mr. Owen H. Collins, F.R.I.B.A., was appointed architect for the conversion of the premises and work is now in progress.

Similar projects are being launched in other parts of the country. One of the Leeds hospitals has four or five hostels to which patients may go on discharge from hospital, while the National Corporation for the Care of Old People has discussed the question of setting up a "half-way house" in Liverpool, a centre where great interest is taken in the subject of the care of the aged. Here the question of converting an existing fever hospital into an old people's home is being considered.

In Scotland, a large house of traditional design, called Clydeneuk, six miles east of Glasgow, has been adapted for about 20 patients to spend a short recuperative period between hospital treatment and their return home.

It is pointed out in the annual report of the National Corporation, however, that no matter how attractive these schemes may be, "It is impossible for the Corporation to carry them out satisfactorily without the aid of statutory bodies. The governors have been disappointed at the apathetic attitude adopted by some of those before whom they have placed their plans, although it has been freely admitted that the experiments are needed and are worth imitating."

Duty of Statutory Authorities.

There appear to be strong arguments in support of a more energetic attitude on the part of statutory bodies to accept the principle of half-way houses. The savings which may be achieved in nursing personnel which these houses offer can be easily noted from figures recently compiled by hospital authorities in Cornwall, a predominantly rural county where sickness in old age is less common than in more urban areas. Of the 2,302 persons in hospitals in the county on April 2 this year, 954—or 41.4 per cent. —were over 60. It may safely be assumed that a good proportion of these were sufficiently physically fit to be transferred to a half-way house, with a consequent saving of nursing personnel in the hospitals.

There must be, in various parts of the country, a number of vacant houses, conveniently placed, which lend themselves to conversion for this purpose; all that is required is a more determined effort on the part of the authorities concerned.

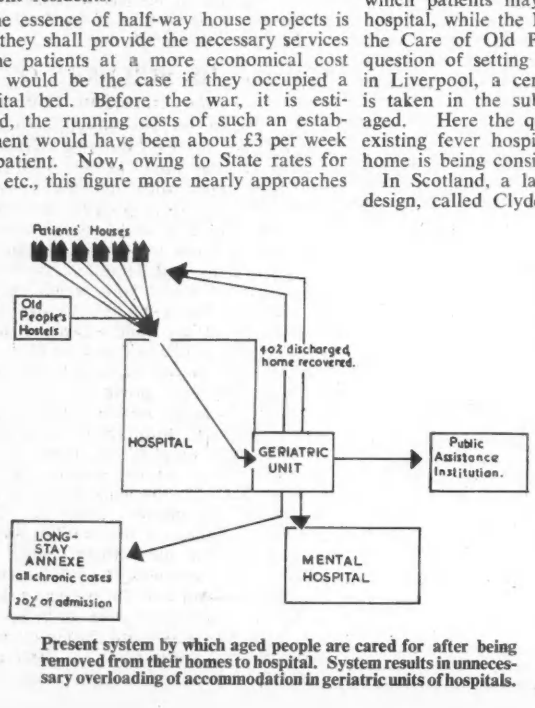
COMPETITIONS OPEN

AUSTRALIAN WAR MEMORIAL. Promoted by the Australian Battlefields Memorial Committee. Premiums: £250, £150 and £50 (Australian). Conditions from the Official Secretary, Commonwealth of Australia, Room 115, Australia House, Strand, London, W.C.1. Closing date, September 1. *March* 17, 1950.

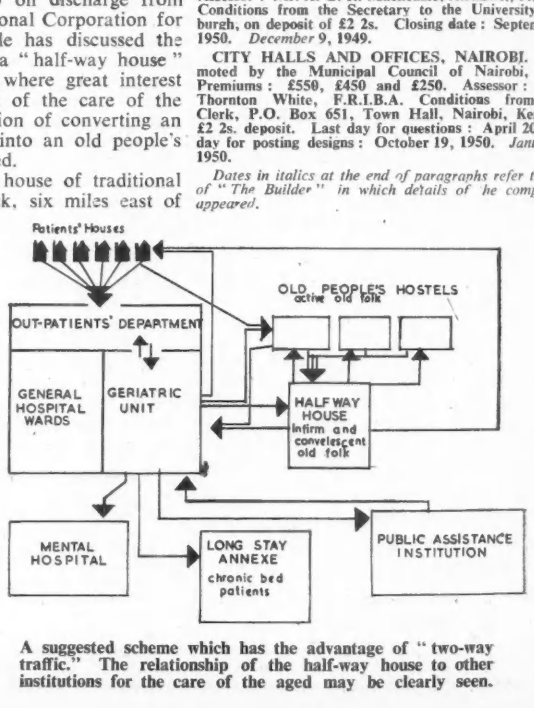
EXTENSION TO MEDICAL SCHOOL, EDINBURGH UNIVERSITY. Promoted by the University of Edinburgh. Premiums: 1,000, 600 and 300 gns. Assessor: Mr. A. G. R. Mackenzie, A.R.S.A., F.R.I.B.A. Conditions from the Secretary to the University, Edinburgh, on deposit of £2 2s. Closing date: September 30, 1950. *December* 9, 1949.

CITY HALLS AND OFFICES, NAIROBI. Promoted by the Municipal Council of Nairobi, Kenya. Premiums: £550, £450 and £250. Assessor: L. W. Thornton White, F.R.I.B.A. Conditions from Town Clerk, P.O. Box 651, Town Hall, Nairobi, Kenya, on £2 2s. deposit. Last day for questions: April 20. Last day for posting designs: October 19, 1950. *January* 27, 1950.

Dates in italics at the end of paragraphs refer to issues of "The Builder" in which details of the competitions appeared.



Present system by which aged people are cared for after being removed from their homes to hospital. System results in unnecessary overloading of accommodation in geriatric units of hospitals.



A suggested scheme which has the advantage of "two-way traffic." The relationship of the half-way house to other institutions for the care of the aged may be clearly seen.

LONDON PLANNING ADMINISTRATION

L.C.C. Opposition to Regional Executive Authority

A REPORT of the appopriate committee of the London County Council advises against the creation of a regional planning authority with executive powers for the area covered by the London Regional Plan. The recommendations, which were adopted by the Council on August 1, were:—

That the Minister of Town and Country Planning be informed that, in relation to the report of the London Planning Administration Committee, the Council is of opinion:

(1) That the creation of a regional authority would certainly involve the dislocation of the present arrangements for the preparation of development plans by mid-1951, which would be a most undesirable result in view of the pressing need for the settlement of such plans.

(2) That it is vitally necessary to deal with the problem of a development programme good for a region as a whole not commanding the acceptance of over-developed local authorities likely to be adversely affected financially, e.g., because of an increase in open space, loss of industry or decrease in population, or of undeveloped authorities who are called upon to expand at a pace and to a degree which are beyond their individual financial capacities.

(3) That the Council is not in favour of the interposition of any further planning authority for regional co-ordination, as this could be effectively secured by Ministerial guidance.

(4) That the execution of regional decisions should be the duty of local planning authorities.

(5) That the major problem is to make positive progress in achieving physical decentralisation of industry and population, in which sphere little has been done and for which the alteration or multiplication of authorities is no substitute.

(6) That the new towns which are sited within the London region must be planned and developed as part of the regional plan; and that there is an immediate necessity to devise adequate joint machinery to ensure that authorities from whose areas decentralisation ought to take place secure a proper share in the allocation of industry and the settling of exported populations from those areas in the new towns and the expanded towns.

(7) That it must be recognised that the long-term planning objective of decentralisation is, in fact, in opposition to the immediate necessity of encouraging by all possible means the growth of industrial exports, even if the latter involved extension of non-conforming industry rather than its removal from the Administrative County of London.

Background to the Recommendations.

The background to the recommendations appears in the report of the General Purposes Committee of the Council, as follows:—

The Minister of Town and Country Planning in March, 1946, appointed the London Planning Administration Committee, under the chairmanship of the Rt. Hon. Clement Davies, P.C., K.C., M.P., to advise him on the appropriate machinery for securing concerted action in the implementation of a Regional Plan for London as a whole. The report of the Committee was published in October, 1949.

The work of the Committee fell into five main sections: (i) A review of the present situation in the London region, and the effect of the Town and Country Planning Act, 1947; (ii) a study of the need for an agency which would be capable of concerted action, both in planning and positive development; (iii) consideration of the part which central Government Departments play—and could be asked to play—in the realisation of the concerted plan; (iv) a study of the special conditions of local government in the region and the need for a revision of its structure; and (v) proposals for interim action to secure co-ordination of planning and development while awaiting a solution to the problem posed in (iv). The conclusions and recommendations on which the Committee were unanimous are as follows:—

(a) There is urgent need for concerted action as regards planning and development, especially development, over the whole of the London region.

(b) Departments of the central Government are not appropriate machinery for securing concerted action, firstly because they are ill-adapted to initiate or to carry through development, and secondly because planning and the carrying through of a plan are functions of local authorities and should not be taken from them.

(c) Some kind of regional authority—possessing executive powers of direction and finance, as well as of control and supervision—must be established (see below for reservation by one member).

(d) A Local Government Commission, under an independent chairman, should be established to investigate the questions at issue in the region and its constituent areas and to make proposals for ensuring effective and convenient local government administration in and over the areas of the region.

The majority report (signed by the chairman and five other members) also recommends, as an interim measure, that a regional advisory committee should be appointed to advise the Minister and prepare co-ordinated proposals on such matters as: planning survey and research; adjustment of target population; open spaces and green belt, road and railway plans and programmes; distribution and balance of industry; distribution of major development projects; and programming and priorities. The minority report (signed by three members of the Committee) recommends instead that a joint Planning Board should be appointed as provided for under the Town and Country Planning Act, 1947, and that the planning powers for the whole region should be exercised by it—instead of by the County and County Borough Councils. In a note of reservation, one of the members expresses agreement with the majority that an advisory committee should be appointed, but considers that the Committee have not had sufficient evidence for the assumption that ultimately this advisory committee should be superseded by a regional executive authority.

The General Purposes Committee consulted the Finance, Housing, Parks and Town Planning Committees, and their views, with which the General Purposes Committee agree, are set out below:

Provision for Concerted Action.—Under the Town and Country Planning Act, 1947, the local planning authorities for the London region were reduced from 145 to 12 (parts of Bedfordshire, Berkshire, Buckinghamshire, Essex, Hertfordshire, Kent and Surrey, the Administrative Counties of London and Middlesex, and the County Boroughs of Croydon, East Ham and West Ham). These authorities are now preparing their first survey and development plan, for submission in July, 1951, to the Minister of Town and Country Planning, who exercises responsibility for regional planning. During the 18 months that have elapsed since the "appointed day," the authorities have been engaged in the recruitment of staff and the intricate problem of the preparation of their surveys and development plans. This work is being done against the background of the three major planning reports for the London region (i.e., the Greater London Plan, the County of London Plan and the City of London Plan). The Minister of Town and Country Planning, in December, 1945, intimated that he would expect the authorities, unless there were strong reasons for not doing so, to adhere for the time being to the Greater London Plan in its present form, as the background against which their control could be administered; and that they should not, in this respect, depart from the principles of the plan without consultation with his officers. The present position is, therefore, governed by the acceptance in principle of the Greater London Plan, and an adequate measure of guidance on concerted action is being achieved at the present stage.

The Establishment of a Regional Authority.—The creation of a regional authority at the present juncture would certainly involve the dislocation of the present organisation, with the consequence that the development plans for the region could not be prepared by mid-1951, as is required by the Act of 1947. It will, indeed, be a hard enough task in any event for the Council and the other planning authorities to complete their plans by 1951. Whether a regional advisory committee or a joint board were created, there would be a consequential transfer or recruitment of staff, with an inevitable disturbance of the rhythm of technical work in the preparation of survey and plan. Moreover, much additional work, and consequently time, would be involved in the interposition of another body for the consideration of proposals. The preparation and approval of a development plan in 1951 for the Administrative County of London is an important objective which should be maintained; it is, therefore, imperative for the present planning authorities to concentrate until 1951 on their own programmes of survey and planning, otherwise those programmes will break down.

Problem of the Rate Structure.

When the 1951 plan has been prepared, it would be valuable to concentrate in the next following quinquennial period on the revision of the survey and plans from the regional aspect. There would thus be provided a logical sequence of events—firstly, broad outline plans and principles for the region (i.e., the consultants' reports); secondly, detailed local scrutiny—survey and plans for parts of the region against the background of the consultants' outline plans leading to the First Development Plan in 1951; thirdly, co-ordination and programming—again on a regional basis, with the benefit of the work put into the first two stages. In considering how effective co-ordination and programming of planning and development can best be secured over a region comprising the areas administered by several autonomous local planning authorities, it is

essential to remember that a programme of development which is good for the region as a whole, and would be acceptable to the Minister as part of a comprehensive national policy, may prove quite unacceptable or impossible of realisation financially to one or more local authorities within the region while the present rate structure remains, if the part of the plan which covers the areas administered by those authorities involves predominantly the discouragement of development, the decanting of population, the increase of open space, or any combination of these necessary but negative activities. Indeed, the total effect of the disturbance, both to undertakers and to local authorities, in "losing" areas such as the Administrative County of London, and of the capital loss involved by these negative activities in such areas, is sufficient to prevent the realisation of properly conceived plans, without taking into account the serious factor of the consequent permanent reduction in rateable values and revenue. On the other hand, local authorities in outer parts of the region may be faced, to meet not their own needs but those of "exporting" authorities, with an expansion of development of an extent and tempo beyond their unaided financial capacity. Having regard to these considerations, there appears to be no prospect of the implementation of adequate plans unless funds collected by the Central Land Board from development charges can be made available in the form of grants which will offset or minimise the losses of the local authorities to a far greater degree than the sums available under the grant regulations made under the Town and Country Planning Act, 1947. If these financial difficulties can be overcome by these means, it would be technically possible, by closer and more frequent collaboration between the Minister's regional planning staff and the local planning staff, for the Minister to be advised what adjustments in plans and programmes were essential in various parts of the region, and for him to give directions to local planning authorities based on his consideration of such advice; the execution of these directions, save perhaps in the case of persistent default, should, of course, be the duty of the local planning authority. The Finance, Housing, Parks and Town Planning Committees, therefore, consider that effective regional co-ordination could be secured by Ministerial guidance, and they are not in favour of the interposition of any further planning body which, as stated above, would only add another stage to the executive machine and would be likely to increase considerably the demands upon a technical manpower already woefully overtaxed. Moreover, in the realm of substantial amendment and effective programming, an advisory regional planning authority would be administratively impotent because financially impotent.

Housing in Relation to Industry.

Co-operation with Corporations of New Towns and Expanded Towns.—One of the reasons why it is considered that the broader regional aspects of the development plan can be left over to be dealt with during the period of 1951-56 is that, with the present restriction on capital investment, it is unlikely that major road and railway proposals will proceed. There is one matter, however, that is of the utmost immediate importance, namely, housing together with the related problem of industry. Almost all the available housing land in London has been earmarked, and so far as out-county activities are concerned there is a limit to acquisition by the Council. The development plan which is now being prepared is intended to be a 20-year programme, and it is becoming increasingly apparent that, unless there are resources outside London for additional rehousing accommodation over and above what the Council is itself to provide, very few of the new schools, open space, slum clearance proposals, road schemes, etc., within the county which should figure in the development plan will be capable of realisation, whether or no schemes are financially practicable.

Little or no progress in the decentralisation of industry has been made over the last four or five years. This is a most serious factor. Corporations have been set up for the creation of new towns to serve the London region. Although there have been various informal contacts between these corporations and the Council, there is no machinery for effective action on the twin problems of decentralisation from inner areas and reception into new towns. Indeed, there seems to be inadequate recognition of the fact that the new towns must, because of their siting within the region, be planned and developed as a part of the regional plan. At present the Council, as a major potential exporter of population, has no recognised machinery for securing its proper share in the allocation of industry and the settling of population in the new towns or the expansion of existing towns. The magnitude of the London overspill problem is such that it seems imperative that the new towns should give first priority to the reception of London's surplus population and industry. If, for lack of a direction to this effect, the new towns, for reasons of convenience or otherwise, draw their population and industries from elsewhere than the London region, the net effect of their creation will be to increase the concentration in the Home Counties instead of decreasing that of London. There is, therefore, an immediate necessity to devise machinery for joint action between those authorities from whose areas decentralisation is to take place and the new towns' corporations. Similar considerations also apply in the case of expanded towns which should be represented on any joint organisation.

This organisation would deal with actual problems of sorting out destinations for undertakings to be decentralised, nomination of tenants by the exporting authorities, and development agencies and related financial problems in new towns. In this connection, attention is drawn to the concluding paragraphs of the joint report on the subject of new towns submitted by the General Purposes Committee, the Housing Committee and the Town Planning Committee on October 21, 1947 (pp. 602-4):—

"For the present, therefore, we are agreed that no representations need be made to the Minister as to his policy (i.e., on the subject of new towns), but propose that consultations shall proceed with the Ministry and other departments and authorities about the relation of the programme for new towns and extension of towns to the realisation of the County of London Plan. Perhaps the most pressing of these consultations which we have already mentioned, and think of supreme importance, will be about the decentralisation of industry from the central area. To a large extent the smooth and co-ordinated decentralisation of population depends upon the decentralisation of industry. We shall aim at the closest liaison between the Council, the Board of Trade and other Government Departments concerned, the new corporations and, in appropriate instances, both sides of industry, to seize what is, in our minds, without doubt the most promising opportunity of securing any substantial transfer of industry from reconstruction areas.

"We have considered whether the Council should seek to participate and, if so, on what basis, in the development of any of the new towns, but have deferred further consideration until precise arrangements for the acceptance of nominated tenants are made known."

The joint organisation would have a sufficiently heavy task in achieving progress in a field where there has been serious failure in the past. Too much, however, must not be expected of this consultative machinery. Many of the delays, disappointments and frustrations which have beset the efforts of the Council over the last few years to remove non-conforming industrial users from London, and to promote industrial development at its out-county cottage estates, have been due not to the lack of proper machinery but to the opposition between long-term planning objectives just mentioned and the immediate necessity to encourage by all possible means the growth of industrial exports, even though that involves an extension of non-conforming user rather than its removal.

CORRESPONDENCE

"A Capite ad Calcem"

To the Editor of *The Builder.*

SIR,—I had almost decided to entitle this letter "A Mixed Grill," but, on second thought, "A Pot Pourri" may be a more appropriate description, as it aims to review, briefly, all "Correspondence" in your issue for June 28.

I do not know Mr. G. Deacon, of Wednesbury, but I agree with him wholeheartedly, and with his suggestion (anent the restriction of architectural appointments) which I hope will be followed up by my many friends in the architectural profession.

Next, we come to the proposed "Society of Metropolitan Housing Architects and Directors"—another good idea, it seems, but such cannot be said of the proposal to form a "Guild of Surveyors." Why another Society? If (as I doubt) there are many "unattached" *bona-fide* surveyors who fear registration, then, I say, they are undeserving of sympathy. There may have been some excuse for such people's diffidence 25 years ago, but now there are more than enough useless societies in the profession and neither rhyme nor reason for *adding* to their number.

And so, finally, to "Hari Bona" and his letter on "Architectural Imports," a ragout of minced metaphors, yet very amusing—and topical—in its wrapping of anti-chauvinism.

G. B. J. Athoe.

75, Eaton-place, Westminster.

Checking the Theft of Tools

To the Editor of *The Builder.*

SIR,—From time to time one hears of the loss by theft of men's tools, lead stripping, etc., thefts which the police appear to be helpless in tracing. Whilst it may not stop the evil referred to, yet if it were made obligatory for anyone pawning tools or selling stolen lead to the junk shops to present his identification card in order that his name and address could be noted, it would at least mitigate the evil and make the task of the police easier. F. J. Gayer.

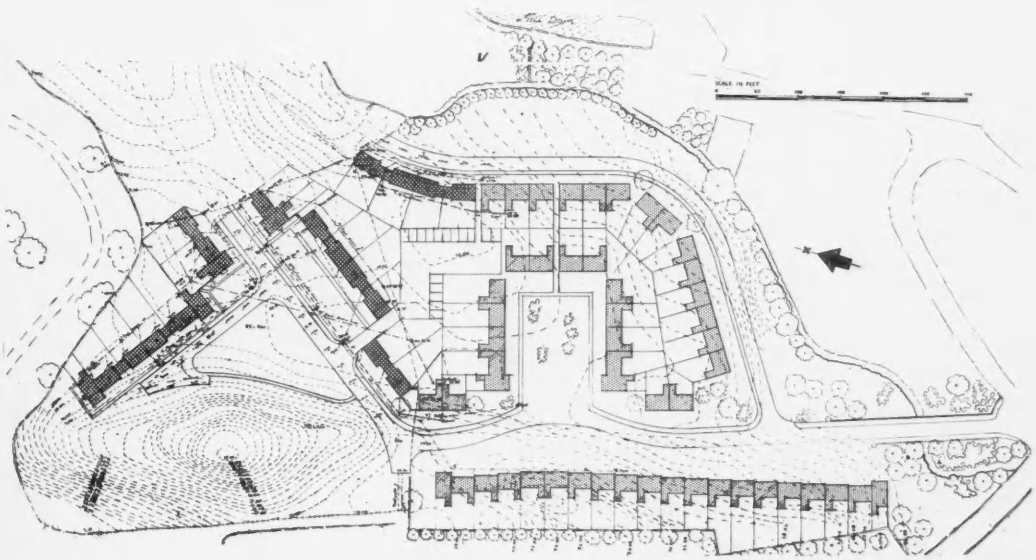
7, Urswick-road, E.9.

View from south, looking towards Quadrangle. *Below:* The site plan. The stippled portions show the completed houses.

HOUSING SCHEME AT LLANRWST, N. WALES

S. COLWYN FOULKES, M.Arch., F.R.I.B.A., ARCHITECT

ILLUSTRATED in these pages are the Llanrwst and Beaumaris housing schemes. The former was opened by the Minister of Health, and has been awarded the Ministry of Health bronze medal, one of the two given for Wales. Following are extracts from the report of the architect, Mr. S. Colwyn Foulkes, M.Arch., F.R.I.B.A., to the Awards Committee: The schemes have been executed in accordance with the original designs—there have been no modifications. There are, however, certain conclusions and a few general reflections on our particular problem in Wales which I should like to put on record.



View of terrace, looking south.

View looking east into Quadrangle.

In Wales almost invariably we have to build on a hill. The conventional pairs of houses with 12 ft. between are consequently inordinately expensive in foundations, and a satisfactory grouping of the individual units, when separated in pairs, is almost impossible. In brief, a house and a layout suitable for the flat counties of England are inappropriate to the conditions encountered in Wales. To meet these conditions it is necessary to design a type of house which can be built to climb up a hill with the very minimum of foundations. If this can be done, sites, which by reason of their steep contour might be rejected, could then be used.

In this scheme I have faced and endeavoured to solve five problems:—

(*a*) How to build the small house on a hill with foundation costs little more than a flat site; (*b*) How best, in exposed positions encountered in Wales, to keep the small house warm; (*c*) How best to equip the kitchen with superior equipment and fittings within the price allowed by the Ministry of Health; and (*d*) How best to compose the whole on a hilly site.

We go a long way to answering these four questions if we build in a row, but we cannot build in a row without a back road or, alternatively, a passage through every other house to the back. Both alternatives are expensive to build and thereafter to maintain. To achieve solutions to the first four questions we have therefore to resolve a fifth problem:—(*e*) How to build in a row without a back road or passage through each alternate house.

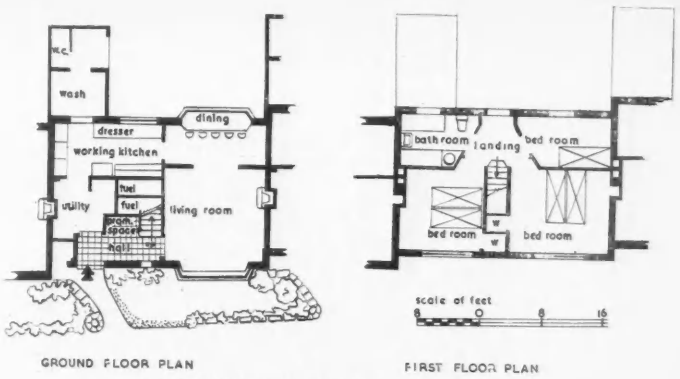
The solution to this last problem, as here evolved, is an innovation. I believe it is the first time it has been done. It is very simple. There are two doors in the covered porch, one for the coalman and the children with their dirty boots, and the front door into the hall for the Vicar and the visitor. Dustmen collect the bin (which is out of sight) from the sunk, covered recess screened by the low stone wall. Twelve months' experience shows this solution to be entirely satisfactory.

(*A*) *Building on a hill:* The solution lies in the traditional Wesh method; dig into the hillside for half the house and carefully plan on this. The type here evolved, by reversing, will go up hill or down dale. In some cases the slope is 1 in 10, and foundation costs are little more than a flat site (*i.e.*, 6 yards of 9 in. brickwork). The moral is that we ought not to be afraid of our hills. We should welcome them and evolve our types to conform to the physical conditions.

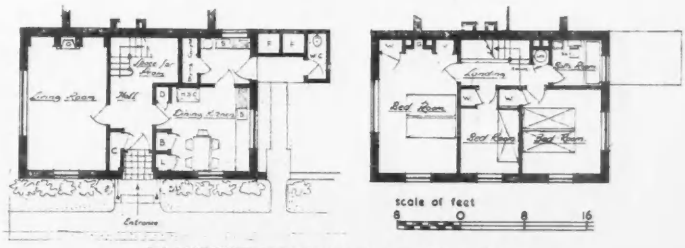
(*B*) *Warmth:* Building in a row is a major contribution to the warmth of the house. There are only two walls exposed instead of three. Built in a row the houses keep each other warm. All houses are equipped with heat storage cookers. They do the cooking and supply ample hot water for 5s. per week, and since they are continuously burning night and day, they supply also that essential background heat to the whole house and to a drying cupboard for wet clothes.

(*C*) *Equipment:* This expensive cooker, the stainless steel sink, the glazed china cupboards, tiling, etc., are made possible only by savings in the structure: 1, by building in a row we save a party wall every other house; 2, we reduce the brickwork in foundations to little more than a flat site; and 3, in the small house, the rooms are, of necessity, small. If these small rooms are to be agreeable in proportion, careful thought must be given to the headroom. I believe that 7 ft. 6 in. is the right height; the regulations call for 8 ft. Believing this I took a chance and a great responsibility and broke the regulations because I am of opinion that it is stupid to ruin the proportions of a small room by making it too high merely to comply with a regulation.

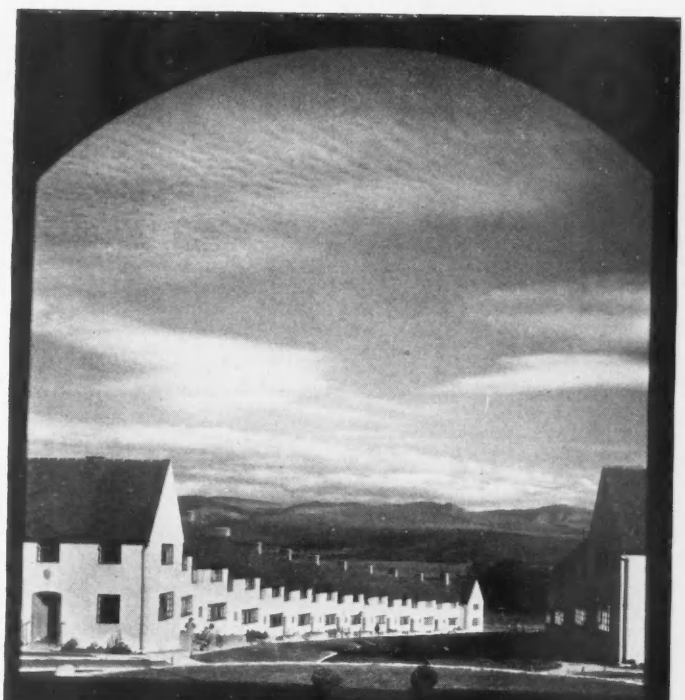
The builder for the Llanrwst scheme was Mr. Frank Tyldesley, of Llandudno, and Messrs. John Hughes (Contractors), Ltd., of Wrexham, for Beaumaris.



LLANRWST HOUSING: Plans of type A house.



LLANRWST HOUSING: Plans of type B house.



HOUSING AT BEAUMARIS. This scheme, also designed by Mr. S. Colwyn Foulkes, illustrates graphically the problem of composing housing on a steep hillside.

View of south-end feature.

OCEAN TERMINAL, SOUTHAMPTON DOCKS

J. H. JELLETT, DOCKS ENGINEER, RAILWAY EXECUTIVE (SOUTHERN REGION)

C. B. DRUMGOOLE, L.R.I.B.A., SENIOR ARCHITECTURAL ASSISTANT

THE new Ocean Terminal at Southampton Docks is a two-storey building, in which passengers will disembark direct on to a balcony at first-floor level and then pass through large waiting rooms into halls where Customs examination and immigration formalities will be completed. They will then descend by escalators to the ground floor where the boat trains for London, or their cars, will be awaiting them. The waiting rooms are situated in the middle of the building and the Customs examination halls at either end. There is also a sightseers' balcony on top of the building.

Planning.—The overall length of the building, excluding the semi-circular feature at the south end, is 1,272 ft. 6 in., the width over the outside walls is 111 ft. 6 in. at ground level, and 94 ft. 6 in. at first-floor level, and the general height from quay level to the main ridge is 53 ft. 7 in. The great length of the building compared with its height made architectural treatment a difficult problem, but advantage was taken of the fact that the first view of the building gained by passengers on incoming ships is the view of the south end, and this was accordingly emphasised by the incorporation of the semi-circular feature, to which reference has already been made, the total height of which to the top of the flag staff is 110 ft. 6 in., which thus bears a reasonable proportion to the visible width. Over the centre portion of the length of the building on the quay side, which is that part of the building immediately in view of ship's passengers after the ship has berthed, the functional separation of the waiting rooms from the Customs halls was emphasised in the architectural treatment by the construction of an enclosed verandah at first- and second-floor levels, whereby the whole of this length of the building was brought forward so as to stand out from the remainder.

Construction.—The terminal is a steel-framed structure supported on piled foundations driven on the Rotinoff patent piling system, the majority of the piles penetrating about 35 ft. below ground level, where they rest on a bed of ballast overlying green sand. A total of 433 piles of 17½ in. diameter and 195 piles of 20 in. diameter were driven for the support of the building and the adjacent transformer house. The steel framework is disposed in a series of cross-sectional frames spaced at 20 ft. 2 in. throughout the length of the structure. On the first floor, freedom from intermediate structural columns is obtained, the building from this level upwards being designed as a two-pin continuous portal frame, springing from rocker bearings at first-floor level. The stormwater disposal system is wholly concealed from the external view of the building. The construction of the island platform is by precast concrete units of standard railway manufacture.

A large proportion of the wall area is taken up by windows, sliding doors or roller shutters. The balance of the walling is constructed in precast concrete slabs of a general thickness of 4 in., faced on the outside with a composition of fine Portland stone aggregate. An inner wall of 4-in. "Lignacite" building blocks, separated by a 2-in. cavity from the outer skin already described, is secured to the latter at intervals by galvanised steel wall ties. Suspended upper floors throughout the building are constructed in precast "Bison" flooring units, supported on shelf angles attached to the webs of the main and

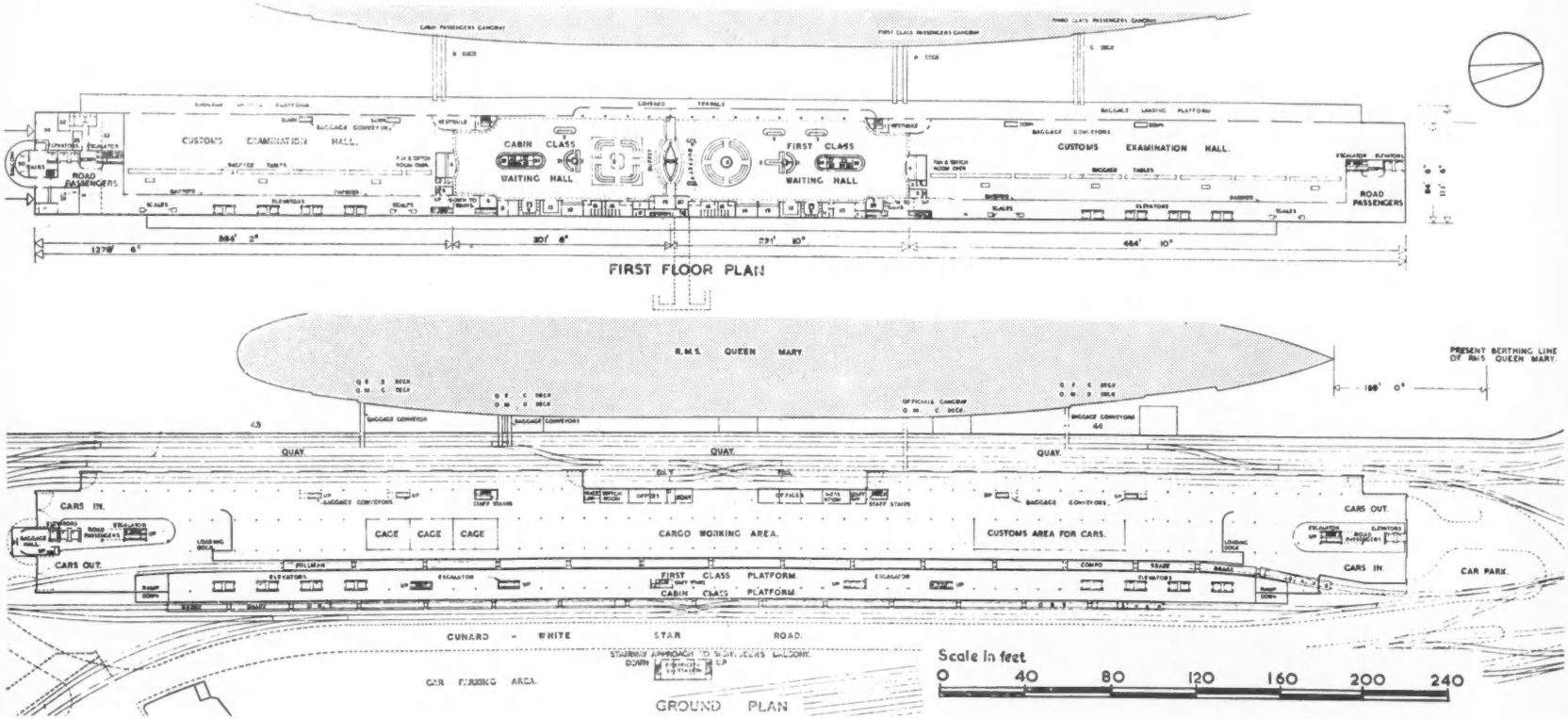
secondary R.S.J. floor beams, a method of construction which achieved considerable economy in shuttering and also facilitated a very rapid completion of the first floor, thereby providing a valuable addition to the very restricted working space at an early stage in the job. The floors, which are surfaced in granolithic, are designed to carry a superimposed loading of 200 lb. to the square foot in the Customs halls, with an allowance for point loads arising from loaded luggage trucks, and 100 lb. to the square foot in the waiting halls. For these loadings 6 in. deep " Bison " units of an average span of 9 ft. 3 in. were used throughout, the difference in the loading being accommodated by adjustments of the amount of reinforcement. The windows generally throughout the building are of pressed steel welded construction, galvanised after manufacture. The pitched roof is covered with asbestos cement combined sheeting, giving two thicknesses of material with a flat surface to the soffit and a ribbed finish externally. Aluminium glazing bars have been used for the long runs of glazing in the roof.

On the east side of the ground floor the outermost line of columns runs the length of a double-sided island platform, capable of accommodating two boat trains simultaneously. In order to minimise the obstruction on the platform arising from the structure of the building itself, the closing of this wall, when the building is not in use, is effected by a bank of 37 roller shutters, each 17 ft. 2 in. wide. The eastern side of the platform is covered by a reinforced concrete canopy 1,058 ft. 8 in. long, projecting 11 ft. from the side of the building, with 1,150 9-in. diameter glass lenses cast into the 4-in. thickness of the barrel. A feature of the terminal is the reinforced concrete sightseers' balcony, 18 ft. 6 in. above the first-floor level. This balcony is constructed of a 4½-in. thick reinforced concrete slab supported on three longitudinal reinforced concrete beams spanning between the main frames of the building. For some 480 ft. in the centre of the building the balcony is widened outwards in two successive stages, the extension being carried by reinforced concrete cantilevers anchored back to the parapet beam or to the main steel framework. This widening enables the balcony to accommodate the enclosed verandah, and for the construction of which the columns, which form the similar enclosure on the first-floor balcony below, are carried up to a distance of 32 ft. above the upper balcony level.

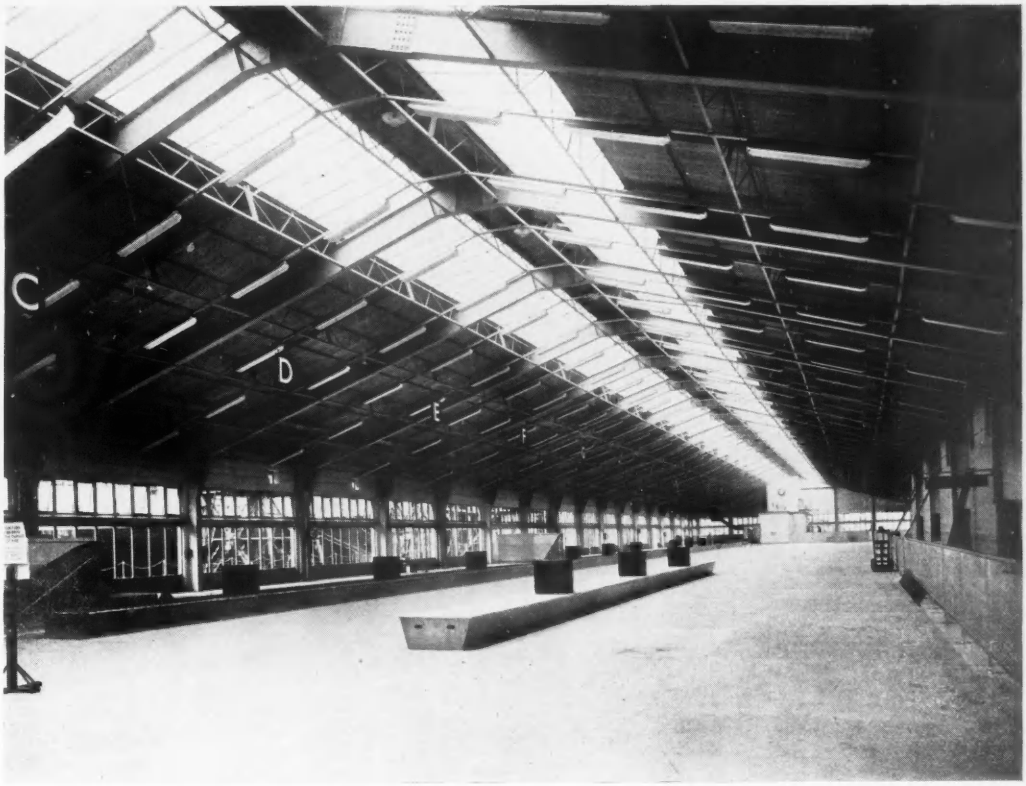
Two expansion joints are provided in the length of the building, one at each of the junctions between the waiting halls and the Customs halls. At each end of these joints the main cross-sectional frame is " afloat " longitudinally, expansion taking place into it from both sides by means of slotted end connections in the floor beams, purlins, etc. Bronze sliding plates cover the joints in the concrete floors and flexible copper strips those in the precast block walls. Aluminium cover plates perform a similar function in roof glazing. Access to the upper balcony is by means of an overhead corridor passing through the slope of the roof above the division formed between the first and cabin class waiting halls. On the east side of the building this corridor connects with a 69-ft. span prestressed concrete footbridge, which is supported at its outer end on a separate building incorporating access stairs and the transformer house in which is accommodated the main sub-station equipment supplying power to the building. The bridge is on a slope of one in nine.

An interesting feature on the western side is the three twin-gangway assemblies which travel on rails in the first-floor balcony. Each assembly comprises a turret carrying a pair of vertically revolving sponsons to which the gangways are attached through horizontal trunnions. Each gangway is telescoped in two sections, the outer end sliding into the inner end so as to allow for variation in the position of the ship's shell doors caused by changes in tide level, etc. Rotation of the sponsons to swing the gangways out to the ship and elevation and depression of the gangways themselves to the required angle are effected by hydraulic mechanisms powered by an electrically-driven hydraulic pumping unit built into the turret structure. The telescoping movement is effected by means of endless roller chains running in the sides of the shore section and to which the outer or ship

General view from the south.



OCEAN TERMINAL, SOUTHAMPTON DOCKS. General arrangement plans.



First-class Customs hall. *Below:* **Corner of first-class lounge.**

section is connected by means of detachable grabs. Detachment of these grabs is automatically effected by the weight of the gangway coming on the hooks which engage with the threshold of the ship's shell door and at the same time the hydraulic pressure in the slewing and luffing mechanisms is released by a solenoid-operated release valve so that the gangway is free to follow any movement of the ship.

Finishes.—In the Customs halls the internal finish is obtained by painting the surfaces of the structural members and cladding. In the waiting-rooms extensive use is made of veneered panelling and a suspended ceiling of fibrous plaster conceals the roof members. Ornamental laylights in the centre of the ceiling admit the illumination from the skylight in the outer roof, and artificial illumination is provided by fluorescent tubes concealed in cornice troughs formed in the ceiling itself.

Heating.—The cargo working area on the ground floor and the Customs halls on the first floor are not heated, but the office accommodation and the waiting halls are heated electrically. The waiting hall heating is combined with the ventilating system by means of heater banks in the main ventilating trunking.

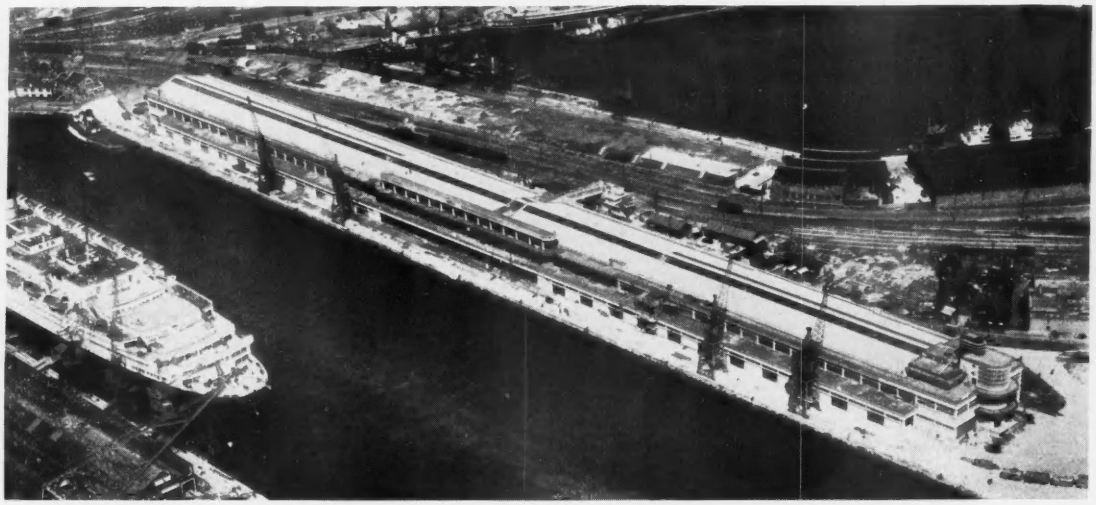
The general contractors were Messrs. Staverton Builders, Ltd., of Totnes, Devon. Sub-contractors and suppliers were :—

Sub-contractors to Staverton Builders, Ltd.: A. C. V. Telling (Southern), Ltd., plastering and granolithic floors ; Art Pavements and Decorations, Ltd., terrazzo paving ; Bruce Martyn, Ltd., waterproofing to r.c. canopy ; Bryce White and Co., Ltd., flush doors ; Carter and Co., Ltd., floor and wall tiling ; Concrete, Ltd., precast floor slabs ; E. C. Blackmore, Ltd., steelwork and balustrades ; Faulkner Greene and Co., Ltd., window glazing ; G. A. Harvey and Co., Ltd., gutters and architraves ; Gardiner Sons and Co., Ltd., crush barriers, railings, etc. ; Goulding and Ansell, Ltd., quayside doors ; Haywards, Ltd., glazing—south feature ; Henry Hope and Sons, Ltd., windows ; John Booth and Sons (Bolton), Ltd., roller shutters ; Joyce Bros., Ltd., plumbing ; Lignacite (Fordingbridge), Ltd., internal wall blocks ; Roberts Adlard and Co., Ltd., roofing ; Rock Asphalte Co., Ltd., asphalt floors ; Shaws Glazed Brick Co., Ltd., faience to south-end tower ; Southern Signs Co., external and Customs lettering ; Straight-Lite Reflectors, Ltd., illuminated direction signs ; Supervents, Ltd., smoke extraction plant ; Blokcrete Co., Ltd., external wall blocks ; and W. H. Heywood and Co., Ltd., roof glazing.

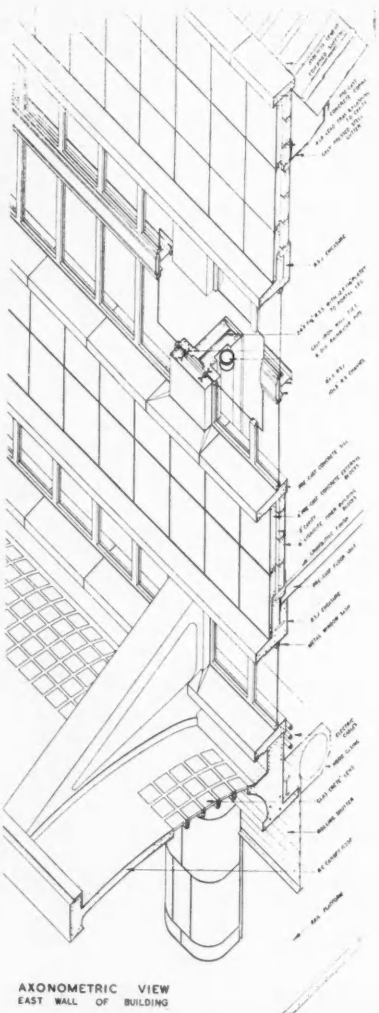
Maple and Co., Ltd., carried out the furnishings, etc., to the waiting halls. With them as sub-contractors were : E. Webb and Co., Ltd., supporting steelwork ; Phœnix Electrical Co. (London), Ltd., internal lighting ; and Viaduct Heating and Ventilating Co., Ltd., ventilating and heating.

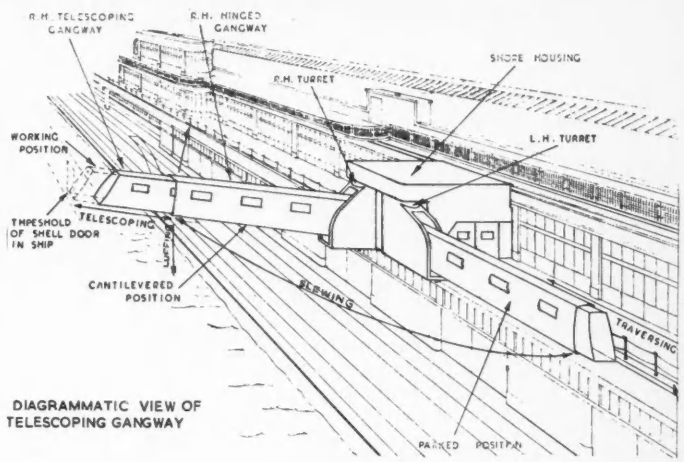
Structural and Mechanical Development Engineers, Ltd., were responsible for passenger gangways. With them as sub-contractors were : Allen West and Co., Ltd., electrical control gear ; T. H. and J. Daniels, Ltd., hydraulic machinery ; and Thorn Electrical Industries, Ltd., gangway lighting.

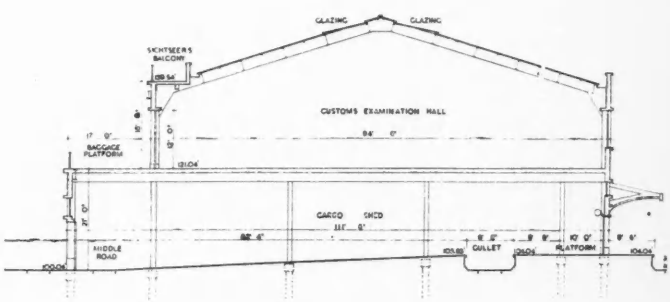
Other sub-contractors and suppliers were : Allen West and Co., Ltd., switchgear ; Ardente Acoustical Laboratories, Ltd., public address system ; Cargo Fleet Iron Co., Ltd., constructional steelwork ; Frederick Braby and Co., Ltd., Customs tables ; Gent and Co., Ltd., electric clocks ; Hammond and Champness, Ltd., lifts ; J. and E. Hall, Ltd., escalators ; English Electric Co., Ltd., internal lighting—Customs halls; Pre-Stressed Concrete Co., Ltd., approach bridge ; West's Piling and Construction Co., Ltd., foundation piling ; and Sovex, Ltd., baggage conveyors.



Aerial view of terminal building.







Typical cross section.

OCEAN TERMINAL, SOUTHAMPTON DOCKS

LECTURE TO PRESTRESSED CONCRETE DEVELOPMENT GROUP

The Magnel/Blaton System of Prestressing

A LECTURE on the Magnel/Blaton system of prestressing was given by Mr. D. H. May, O.B.E., A.M.Inst.C.E., M.I.Struct.E., to a meeting of the Prestressed Concrete Development Group.

MR. MAY said: The prestressing technique is fundamentally a simple one. Let us hope that it will always be regarded as such, although one has grave doubts as to the desire of some people to accept or maintain this state of affairs, if the clouds of symbols, both known and unknown, that they use in their calculations can be regarded as a criterion of their attitude. Now, such mathematical gymnastics leave the practical engineer, not unnaturally, a little impatient. In the past 30 or 40 years he has, when all is said and done, been left with his section book for steel work design and his graphical aids for reinforced concrete, and I believe it is true to say that the vast majority of structures built to-day derived the justification for their existence from these simple aids.

However, force of economic circumstance and developments in the technique both of design and of construction are compelling us to look for economic methods where our materials can be used more effectively and the labour factor, particularly the skilled element, in a decreasing proportion.

The Virtue of Simplicity.

Apart from design considerations (which, let us confess, are rather tiresome in some respects at this stage of development), prestressed concrete construction commends its employment to the engineer by virtue of its simplicity. This may not be apparent to those who have not yet accepted the challenge of the protagonists of prestressed concrete, but those of you with practical experience will, I am sure, agree with me that teething troubles apart (and these are inevitable when introducing new methods into construction) the technique is extremely simple.

I want to illustrate this point by showing you a drawing which gives details of a simple every-day requirement, namely a beam of 60 ft. span to carry 3 cwt. per foot run (Fig. 1). The beam is required to form one of a pair of such beams to carry a 6 ft. walk-way between adjacent factory buildings. The design is shown both in reinforced concrete and prestressed concrete. Here we see the two views, the upper being the reinforced concrete design. This requires, as you will see, 380 cu. ft. of concrete and 34 cwt. of steel, and the reinforcement requires 700 bends to be made before fixing. The lower view is a prestressed beam, and tells a different story: 280 cu. ft. of concrete, 11.9 cwt. of steel and 390 bends to be made in the reinforcement before fixing.

You will doubtless hear much dissertation upon the need for high-strength concrete for prestressed work. Unfortunately, my terms of reference prevent digression into this most interesting subject. However, I cannot pass without saying how absolutely essential first-quality materials are in prestressed structures. The usual requirement of 6,000 lb. per sq. in. at 28 days on a 6 in. cube is not too difficult to obtain. The difficult thing is to get that strength consistently. That is why quality control is the first essential on any prestressed concrete contract. Variations in strength over a wide range cannot be accepted.

Adequate Protection Against Corrosion.

The use of high tensile cold drawn steel wire as reinforcement has introduced many new problems, not the least of them being its adequate protection against corrosion. It may be said that the technique of prestressing in itself assists to this end, by ensuring that at no time is the concrete subject to tension so that the entry of moisture through hair cracks that might result from this stress is eliminated. While this assumption may be acceptable in theory, other factors merit consideration.

Our nominal prestressing cable is made from 0.2-in diameter wire and is stressed to, say, 120,000 lb. per sq. in. at anchorage. In general we take our working stress as 80 per cent. of the .2 per cent. proof stress or 60 per cent. of the ultimate stress, whichever gives the lesser result. You will see that after allowing losses of prestress, a loss in cross section area of 29 per cent. increases our residual stress to the proof limit—a very serious state of affairs—but in practice it only requires a reduction in wire diameter of .032 in. to produce this result. Less than twice this loss will cause the ultimate strength of the wire to be exceeded under full working load.

It must, therefore, be conceded that adequate protection of prestressing cables is a first essential in any construction method. In addition, adequate protection is very desirable for considerations of fire resistance—an aspect of the prestressing technique that to date seems to have received little academic attention. Notwithstanding this, however, tests on full scale beams carried out on the Continent both during and since the war give very satisfactory results, within the range of temperatures one is normally expected to encounter when considering resistance to fire.

At some tests recently made at Maastricht a post-tensioned beam reinforced by the Magnel/Blaton cable over a span of 11m. 60 was subjected to a fire test when sustaining its working load of 600 kg. per m. The duration of the fire was for 3½ hours and the maximum recorded temperature on the lowest surface of the bottom flange was 865 deg. C. The maximum additional deflection during test was only 3.34 mm. and the additional permanent deflection after the beam had cooled was only 0.02 mm. These results are highly satisfactory and suggest that adequate reasons exist to justify the claim that prestressed post-tensioned beams can sustain the effects of fire with marked success.

Turning now to the Magnel/Blaton or sandwich cable system, the principal components employed are three in number, namely, the cable itself, the end anchorage and a third equally important feature, the extractable rubber core. One other item is the prestressing jack itself.

First, take the cable. This is rectangu-

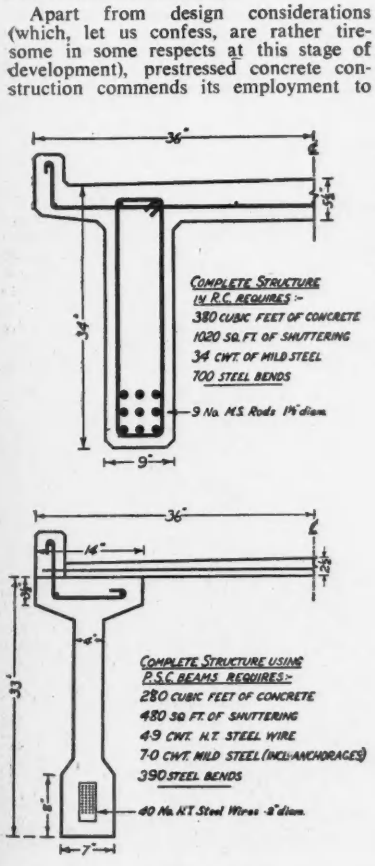


Fig. 1.

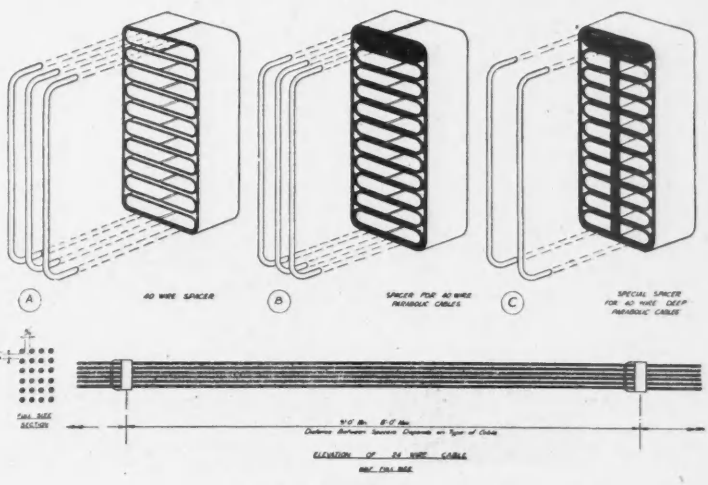


Fig. 2.

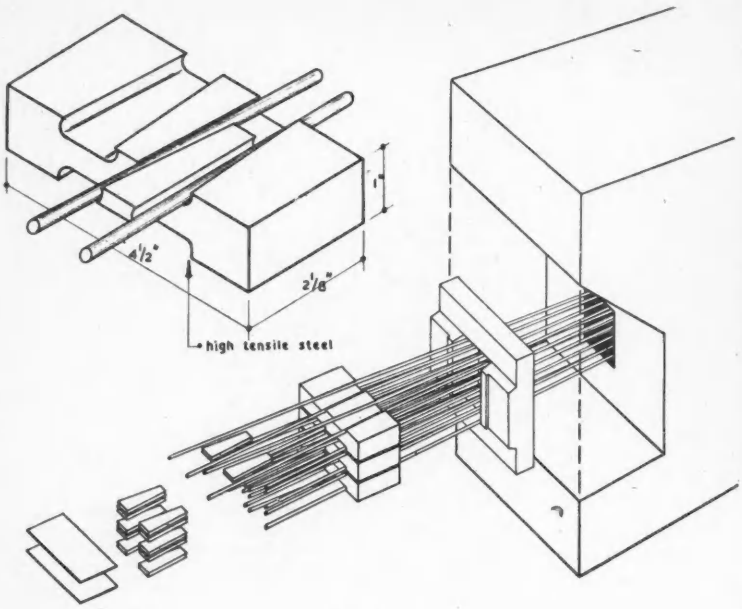


Fig. 3.

lar in form and comprises a series of wires in layers—four per layer. The cable is provided with vertical and horizontal spacers that ensure a regular geometrical form of wire layout, there being 3/16 in. between adjacent wires in both directions (Fig. 2). This shows a diagram of a 24-wire cable. The spacing of the wires is shown, together with the positioning of the spacers which are arranged to retain the wires both vertically and horizontally. They are simple in form and cheap to mass-produce, being made from black strip 1 in. wide. Their weight and type vary, and depend upon the type of cable being made. For instance, a straight cable will be equipped with spacers of the type A, these being placed at, say, 8 ft. centres. On the other hand, if the cable were parabolic it would be provided with heavy spacers of the type B. These are designed to retain the wires in their correct positions, and will sustain the secondary stresses set up as a result of the cable being stressed in its parabolic shape. The object of filling the uppermost space solid is to prevent the top layer of wires being brought into contact with the parent concrete of the beam. This solid filling may be obtained by the use of a small slip of metal or by introducing a number of short wires, say, 6 in. long into the space. The positioning of the spacers in the parabolic cables is determined by the rate of curve, i.e., the slower the curve the greater will be the spacing.

Maintaining Wires in Position.

You will thus see that every precaution is taken to maintain the wires in their correct relative positions under all conditions, and this achieves two aims :

(1) the friction losses encountered during prestressing are reduced to a minimum.

(2) the cable is what is described in Belgium as "aerated," thus permitting a free flow of grout which ensures complete protection of the wires.

Incidentally, the heavier grille marked C is used in very deep parabolic cables where the secondary stresses imposed are of a high order and would tend to crush the lighter spacer. They are only necessary in abnormal cases, such as the very short main beams of the new Ministry of Works Building at Sighthill, Edinburgh.

The mechanical end anchorage consists of two basic units, namely the distribution plate and the sandwich plate. Fig. 3 shows the approximate dimensions of a sandwich plate and also an "exploded" view of an end anchorage, showing in turn the recess normally incorporated in the end of the beam, the distribution plate, the sandwich plates, the wedges and the shims. These latter are merely slips of 16-gauge black sheet interposed between adjacent sandwich plates; their purpose is to separate the four wires in the adjacent surfaces of the sandwich plate, and also to separate the wires at the point of their entry into the anchorage.

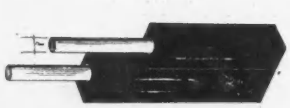


Fig. 4.—Core for 40-wire cable.

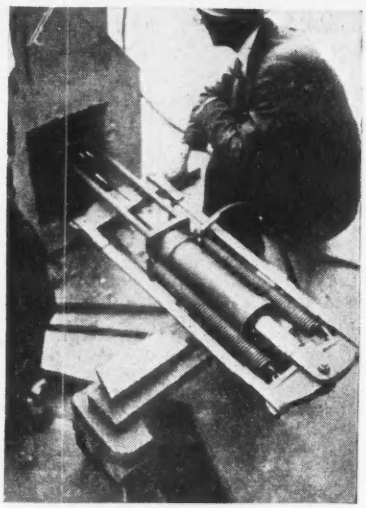


Fig. 5.

The sandwich plates themselves are made from a semi high carbon steel and are approximately 4½ in. long by 1 in. thick by 2⅛ in. wide. Each plate retains four pairs of wires by means of trapezoidal slots into which are introduced steel wedges with a corresponding taper. This is clearly seen in the illustration. The wedges are also of semi high carbon steel of a slightly lower tensile quality. The distribution plate in its present form is a light steel casting which is embedded with cement mortar on to the end of the beam. It ensures that an equal local compression exists at the anchorage zone. The area of the distribution plate is such as to produce a local compressive stress on its area of contact of 1½ times the permissible working stress in the concrete of the beam in bending.

The Extractable Core.

That covers the various permanent components and there now remains only the extractable core. Until recently cables were fabricated and enclosed in a light metal sheath. Apart from considerations of cost, however, this had many technical disadvantages. It was very difficult to make a grout-tight sheath without the introduction of some compound or adhesive material at the joints and it was also difficult to introduce parabolic cables.

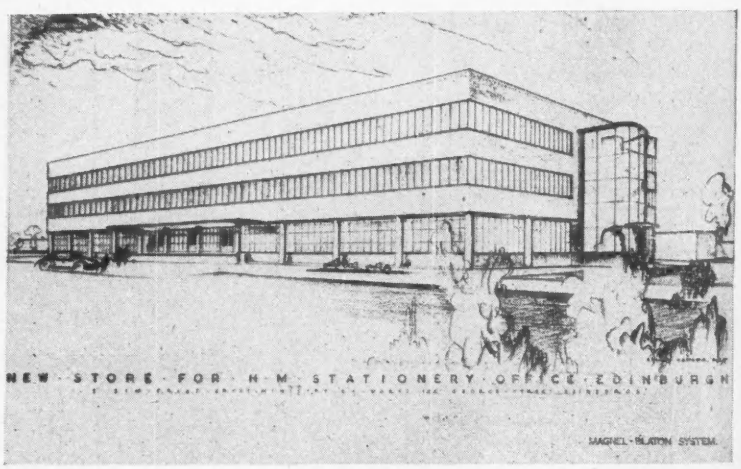


Fig. 6.

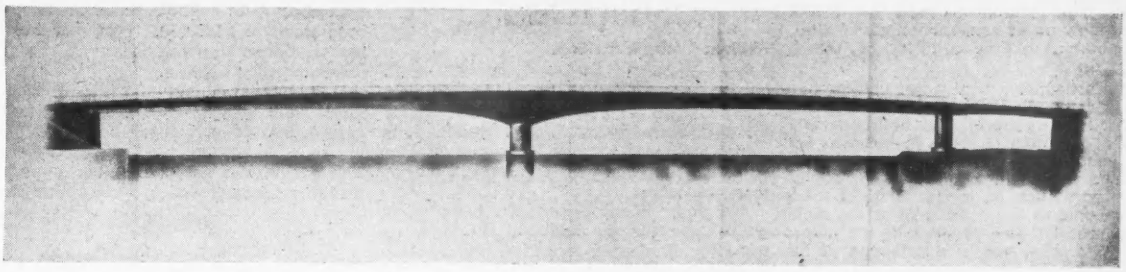


Fig. 7.

Moreover, there was no direct contact between the parent concrete of the beam and the pressure grout which will be discussed later. The first stage in the elimination of this sheath was the introduction of a heavy extractable steel core, such as was used on the Ghent textile factory. This eliminated the permanent metal sheath but was only suitable for straight cables. The rubber extractable core represents the present stage in development (Fig. 4).

There are two standard sections of core available: one is 2 in. by 2¼ in. and the other 3 in. by 2¼ in. Both are manufactured of natural rubber by extrusion, and incorporate a central hole 1$\frac{3}{16}$ in. diameter. You will see that by a combination of these two sizes it is possible to vary the size of hole left from a minimum of 2 in. depth to any maximum required in increments of 1 in. As an example, a 16-wire cable will require a single small unit and a 56-wire cable will require two of the smaller units and one of the larger. To impart mechanical rigidity to the core assembly a hollow steel inter-core is introduced through each of the 1$\frac{3}{16}$-in. holes. This inter-core is made from galvanised water barrel and fitted with screw connections at suitable centres. Beams up to 160 ft. in length have been made with success using this core, and while the usual procedure is to extract it between one and three hours after casting, it has been left in for periods up to two weeks and withdrawn with equal ease.

On a bridge now being constructed in Philadelphia cores are being extracted five days after beams are cast, and the operation presents no difficulty. Incidentally, the beams are 160 ft. long and the cores are made in two 80-ft. lengths, one length being extracted from each end.

The Magnel Prestressing Jack.

The last remaining item peculiar to the Magnel system is the prestressing jack (Fig. 5). This consists of a hydraulic cylinder with ram and two return springs, cross-head and two connecting links which are in turn connected to a second cross-head equipped with a large wedge and slot similar in form to those in the sandwich plate. This latter cross-head operates between the four legs of a hollow frame, which, in turn, is connected to a base-plate, annular in form. The function of this plate is to press against the assembled sandwich plates and thus provide the necessary reaction to the outward movement of the hydraulic ram. This pressure results in the ram retracting the cross-heads and with them the two wires being tensioned. The degree of tensioning is controlled by the extension imparted to the wires, *i.e.*, the strain is regarded as the criterion of stress induced. The hydraulic pump used in conjunction with the jack is of standard design and is equipped with a pressure clock, the reading being used as a check on the extension. The overall size of the jack with the ram closed is 3 ft. 4 in. and it weighs approximately 1 cwt.

Recently, developments and modifications in the process have taken place, particularly in the operation of cable grouting, to which we pay considerable attention in this country. The standard procedure is now to inject grout under pressure, using a machine producing a colloidal type of material. This has been found to give the most satisfactory results and to impart to the cable that high degree of protection which is so essential. The make-up of the Magnel/Blaton cable lends itself particularly well to an efficient grouting, as there is a free path for the full length of the cable through which the grout may flow and provide a completely impervious protec-

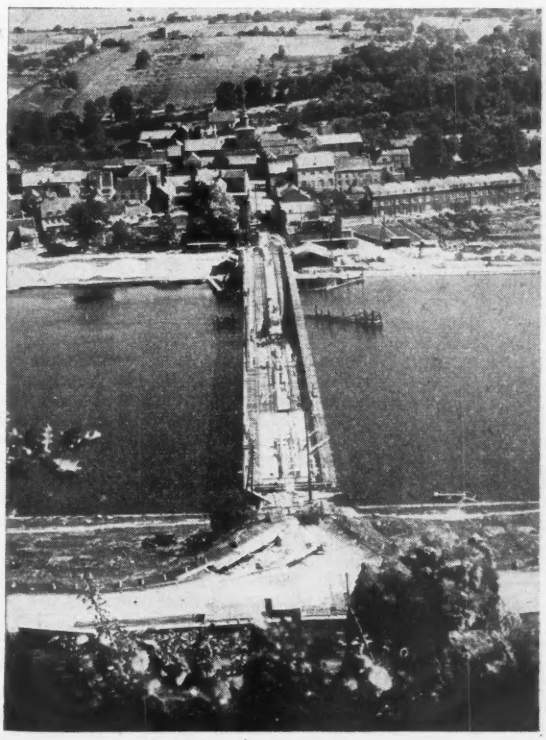


Fig. 8.

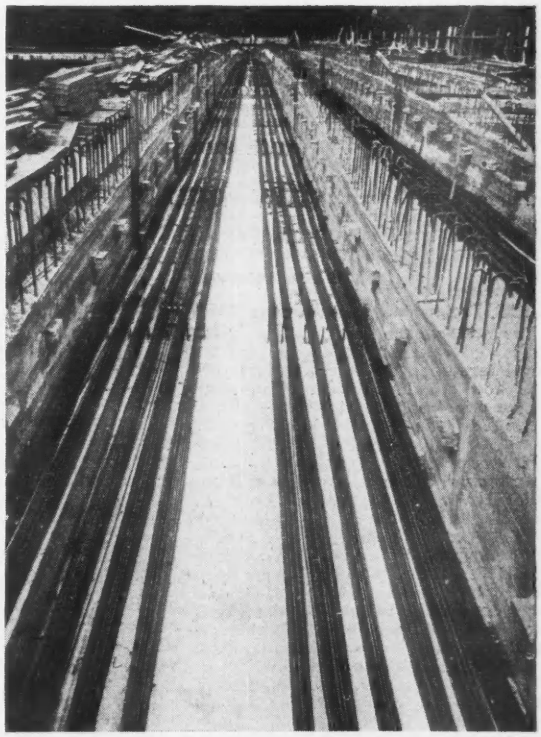


Fig. 9.

tion. This method has been used in the store now under construction at Sighthill, Edinburgh, for the Ministry of Works (Fig. 6).

Unfortunately, there is not time to give further details of other work being carried out on the Magnel/Blaton system, but at the moment some 16 contracts are in hand or about to commence in the United Kingdom, and these will, doubtless, be written up in the technical Press from time to time. In spite of the rapid advances in the prestressing technique since M. Freyssinet's introduction of his revolutionary concepts many years ago, one cannot help feeling that we are still at the dawn of a revolution in the principles of concrete construction. Much remains to be done in the application of prestressing of continuous structures, and particularly to building frames. Certain experiments have already been carried out in this direction, but a practical solution that is competitive in a commercial sense remains to be devised. The completion of the continuous structure main-road bridge at Namur, where the stressing was carried out by means of thirty-six 48-wire Magnel/Blaton sandwich cables, using 7 mm. wire, is an interesting advance in the right direction. This bridge covers two principal spans of 204 ft. each and carries full Continental road loading. Figs. 7, 8 and 9 give some impression of the magnitude of this structure.

Discussion.

Q.1.—The question of grouting was raised and the effect of a wet grout on the bond stress with a 2½ : 1 mix was queried.

Reply.—With regard to the colloidal type grout which we use, the water content is nine gallons of water to two bags of cement, which works out at a low water/cement ratio. In fact, we have found that, taking test cubes of this grout straight out of the machine, shrinkage is practically non-existent. Another mix is a 1 : 1 sand, cement, and there are two points of view as to which is the most satisfactory.

Q.2.—In view of the large amount of mechanical equipment required, how large a job would be necessary to make it economical and worth while?

Reply.—I cannot accept the fact that abnormal quantities of mechanical equipment are required. There is only one special tool needed and that is the jack, apart from standard equipment used on any type of contract and which every contractor can obtain or already possesses. The erection programme is the important thing and a contract may be made or marred by the contractor's erection methods.

R.I.C.S. Professional Examinations, 1950.

The prize-winners and pass list in the professional examinations, 1950, of the Royal Institution of Chartered Surveyors have now been announced. Following are the principal prize-winners:—

Penfold Gold Medal, Driver Prize and John Gilchrist Prize—J. Gilchrist (Darvel); *Special Prize*—E. T. Rout (London, N.8); *Wainwright Prize*—N. I. Behr (London, N.W.6); *Galsworthy Prize*—E. Weavell (Stoke-on-Trent); *Institution Prize*—C. E. Amies (Lancing); *Beadel Prize*—D. F. Ritchie (Weybridge); *Mellersh Prize*—H. D. S. Hobbs (Hawick); *Crawter Prize*—F. H. Hawkins (London, W.2); *Quantities Prize*—D. C. Brown (London, W.4) and P. G. Guest (London, N.W.2) (shared); *Constructive and Working Drawings Prize*—A. J. Roughton (London, S.E.12); *R. Irwin Barr Prize*—W. A. Cuthbertson (Glasgow, C.3); *Hyman Marks Prize*—J. M. Trickett (Birmingham, 25); *Julian Rogers Prize*—G. Campbell (Glasgow, S.W.3).

OBITUARY

William Weir, L.R.I.B.A.

We announce with regret the death recently, at the age of 84, of Mr. William Weir, L.R.I.B.A., a member of the Society for the Protection of Ancient Buildings, in whose principles he was a devoted believer and whose lifetime was largely spent putting them into effect.

Although examples of his preservation work, especially on mediæval churches, are to be found in many countries, few are sufficiently prominent to enable the layman easily to recognise them, and this is undoubtedly one reason why so much of his best work has been overlooked. He was content, however, to allow the eye of the public to pass him by. His chief pleasure was not to see his own work admired, but to know that what he had done had given renewed life to the great work of those who had gone before. He considered their work deserving of all the glory; yet he proved (as, for instance, in his design for the roof of the great hall of Dartington Hall, Totnes) his own ability to create after the true style of the mediæval craftsmen.

William Weir reached the peak of his career shortly before the 1914-18 war, at which time he employed a team of skilled craftsmen whom he had himself trained. At this period he was regularly travelling from country to country, working with that tireless energy which he successfully strove to maintain throughout his long and active life.

The war deprived him for ever of the valuable help of a number of his skilled assistants, whose pride and enthusiasm for the work upon which they were engaged had, in most cases, equalled that of their employer. Through these circumstances he was forced in subsequent years to change the working methods he had previously adopted. He saw to it, however, that the high standard of workmanship which he had established did not suffer as a consequence, and many more buildings were preserved under his scrutinising supervision.

To all who are to-day concerned with the protection of old buildings, the work of William Weir, necessarily inconspicuous though much of it was, stands as a remarkable achievement in the art of preservation.

HOUSING PROGRESS

Figures for June

THE HOUSING PROGRESS REPORTS presented to Parliament on August 5 as White Papers* by the Minister of Health and the Secretary of State for Scotland show that the number of permanent houses completed in Great Britain during June was 18,107 compared with 17,030 in May and 14,862 in April.

This brings the number of permanent houses completed during the year to date to 97,809, made up as follows: January, 14,356; February, 14,069; March, 19,385; April, 14,862; May, 17,030; June, 18,107.

The total number of houses completed under the post-war programme is now 878,302 (721,156 permanent and 157,146 temporary).

During June homes were provided by new building, repair of uninhabitable houses and conversion for 18,760 families, compared with 18,117 in May and 16,126 in April. This brings the total number of families rehoused by these methods under the post-war programme to 1,155,938. This total does not include homes provided in service camps or requisitioned properties.

It is estimated that at the end of June there were 233,900 men employed on the construction of permanent houses and preparation of housing sites in Great Britain. This figure does not include the number of men directly employed by local authorities.

* Cmd. 7998 Housing Return for England and Wales, June 30, 1950. H.M. Stationery Office, price 9d., post free 10d.

* Cmd. 7999 Housing Return for Scotland, June 30, 1950. H.M. Stationery Office, price 6d., post free 7d.

BOOKS

NATIONAL INSURANCE. By Douglas Potter and D. H. Stansfield, Barristers-at-Law. Second edition. Pp. xix, 533. (London: Butterworth and Co., Ltd.) Price 30s.

NATIONAL INSURANCE (INDUSTRIAL INJURIES). By Douglas Potter and D. H. Stansfield, Barristers-at-Law. Second edition. Pp. xix, 392. (London: Butterworth and Co., Ltd.) Price 21s.

THE FIRST EDITION of each of these works appeared in 1946 shortly after the relevant Acts had been placed upon the statute book. Although passed in 1946, the National Insurance Acts did not come into force until July 5, 1948. In the meantime, numerous regulations were issued filling in the administrative details which could not be (or at least were not) included in the Acts.

The number of regulations issued under the National Insurance Act was exceptionally heavy—due, it is said, to the great complexity of the subject. The second edition of the book on this Act contains the text of no fewer than 42 statutory instruments made under the Act. The industrial injuries scheme is inherently simpler, but even here some 20 statutory instruments had been made by the beginning of this year. In passing, one cannot help regretting that so much of this legislation—affecting as it does the whole population of this country—should be contained in statutory instruments. No doubt this is inevitable to a large extent, but in view of the modern predilection for delegated legislation, one cannot but wonder whether the number of statutory instruments could not have been somewhat reduced.

However, the very fact that there are so many statutory instruments made a second edition of these two books imperative. Indeed, without these two works the difficulties of studying the national insurance schemes would be greatly multiplied. Each book contains a well written and interesting general introduction, followed in each case by the annotated text of the appropriate Act and its subsidiary regulations. The book on the industrial injuries scheme also contains references to decisions of the Commissioners set up under the Act.

It is a little surprising that neither work contains the text of that very important measure the Law Reform (Personal Injuries) Act, 1948, although a brief account of the Act is given in the general introduction to each. This was the Act which abolished the doctrine of common employment and also dealt with the problem of alternative remedies under the National Insurance Acts and at common law. It might have been expected that the latter question would have been covered by the 1946 legislation, but the Government saw fit to ask an expert committee to investigate the matter. Hence it was not until 1948 that legislation was forthcoming. A. E. T.

M.o.W. Appointment.

Mr. R. R. Stokes, M.P., Minister of Works, has appointed Mr. A. W. Cunliffe, M.B.E., to be his Private Secretary in succession to Mr. P. H. Cooper.

COUNCIL FOR VISUAL EDUCATION

Seventh Annual Meeting

THE use which should be made of the medium of television for encouraging the public in the appreciation of good architecture was pointed out by MR. NOEL CARRINGTON and other speakers at the seventh annual meeting of the Council for Visual Education which was held on June 29 last. Sir Patrick Abercrombie presided. The following extracts are taken from Mr. Carrington's remarks:—

We have to remember all the time that love of an art must precede understanding, for human nature is made that way. But I think we are also aware by now that if love does not develop into understanding it may prove unhappy.

Our problem is how to kindle a love of good architecture in this country, and then inculcate an understanding, when there has long existed in the majority of the population a total indifference to architecture, or else a taste which is generally misguided or even pernicious. I know this Council is not the only body working in this field. Even so, relative to the size of the task, are not our numbers and powers so limited that we ought to be astonished at our audacity? Fortunately, if an idea is intrinsically right, it may prevail in a surprisingly short time, because as it gathers adherents it gathers also momentum.

In our own time we have seen an astonishing revival in the appreciation of music, mainly, I think, through the medium of broadcasting. The musical leaders at the B.B.C. must have had the same task, to develop a generation of music lovers and not music snobs. I think they have succeeded, and it is not therefore so much the magnitude of the problem which ought to daunt us, as the path we take, lest it be the wrong path.

Teaching Children.

It would be fairly easy to teach the mass of children at school a superficial knowledge of styles so that they could put a date to furniture and buildings, as boys can to locomotives, aeroplanes or stamps. When I was at school we learned to distinguish between the Early English, Perpendicular and Decorated; I suppose because the relics of these styles were to be seen mostly in churches, and anything to do with churches was presumably good for one, that amount of architecture was permitted. I am sure no boy at my school had ever heard of Vanbrugh, Kent or Adam, and I am pretty sure that no master had either. But even if they do all know these names to-day, is it of any consequence? For most of these names will go out of their heads along with those of Prime Ministers and Generals. Architecture may even become yet another subject for a leaving examination, to be left behind as soon as the last term is ended.

The use of photographs on large wall cards is a popular development nowadays as a supplement to ordinary text books and classroom education. One of the early exponents of wall cards was the late Harry Peach. Peach's cards were technically less accomplished than later efforts. The method has been very greatly developed, especially by A.B.C.A. during the late war, and by the Council of Industrial Design. This type of visual education has from its inception formed a considerable part of the Council's work, and it has enjoyed the close collaboration of the education authorities.

Possibly the two Councils might benefit by an exchange of notes in this field, not only in the technique of presentation but also that of distribution. We have greatly advanced in our technique of presentation, but we still have to consider what the effect on young minds is going to be in the long run.

In connection with this question of education, one thing occurs to me each time I come into my village and see the rows of houses on either side of the main road. Ribbon development was one of the worst features of the inter-war years. Many of our roads are lined with the horrible semi-detached villas which make the architect squirm. According to the regulations, houses on a main road have to be situated a certain distance from the centre of the road. People responsible for development found this condition rather trying until it occurred to local surveyors to build the houses with the back instead of the front gardens on to the road. The result is an untidy mass of chicken houses, compost heaps, etc. The children, of course, continue to use the main road as a playground. So much, then, for better taste by legislation.

An Instinctive Feeling.

All of us, children at the youngest age, and the child that remains in us, have a feeling for buildings. I mean for just plain buildings with bricks, stone or wood. I often watch the crowd that lingers on the pavement at lunch time, watching the builders on a big job; the crowds are particularly thick now because there are not many big jobs to watch. Isn't that interest something on which we in turn should build? The child's approach to building is at any rate commonsensical. He isn't prejudiced as a grown-up becomes. Let him see the materials and the construction that went to make the great and little buildings, and I think he will come to approach the finer points of architecture with more understanding. This capacity to appreciate will grow because it will be based on understanding.

When I visited my boy's school at half term recently I noticed some of the wall cards on furniture which the Council of Industrial Design has prepared. I saw them in a new light because they were pinned up in the furniture-making shop where the boys work. This seemed the proper connection, and though the cards were no longer as clean as when they were prepared I thought how much better this was than the framed views of the Acropolis and ancient statues which used to hang on the school walls.

It is obviously not as easy to relate architecture to everyday life as it is perhaps pottery or printing. It is a more complicated art. But we have a new medium in television, and perhaps we ought to be thinking how to make use of it. It won't be by turning the camera into a kind of roving guide. The thought of one of those guide's tours of Versailles while sitting in an armchair at home would be as tedious as it would be easy to accomplish. I suggest that if we are to make architecture intelligible to boys and girls, we ought to start from the foundation and let them see the whole operation of building. The opportunity that now opens up, so it appears to me, is almost unlimited in scope and tremendously exciting. I think that the B.B.C. will be ready to do for the visual arts what it has done for music. Our council, with its experience of interesting the layman in architecture, should be in a good position to help with an accumulated fund of enthusiasm and experience.

Discussion

In the discussion which followed MR. O. P. MILNE said what was important was that we should get people to use their eyes. It was a question of persuading them to look at and appreciate good things, but they had to be taught to observe not only with their eyes but with their brain behind their eyes. The emphasis these days was all on the ears. Through newspapers, and listening to the wireless, people had got into the habit of forming their opinions through what they heard.

An interesting experiment was being tried at Hampstead. Screens had been set up near the Heath, on which any artist, on Saturdays and Sundays during July and August, could display his work. It was surprising how keen the public was to go and look at these pictures, and sales had been quite considerable. This was one way of getting people to look at pictures and judge them themselves.

The great public did not care to go to exhibitions. Perhaps they were frightened of being told that their taste was bad, and that they had bought the wrong thing. Most of the pictures in this open-air exhibition were very gay, if nothing else. Just as people learned to judge between one picture and another by looking at them, so, he believed, if people could once be persuaded to observe buildings, they would in time be able to form a judgment as to good or bad.

In these days, in spite of so much being done to encourage art, the English were really very vulgar. No one passing down Croydon or Reading or any other High-street could fail to notice the vulgarity. These streets, taken as a whole, were the product and the common denominator of taste of the people of England. He hoped that a new generation would arise which would see things with better eyes, and therefore make things better to look at.

Television Programmes.

MR. H. M. CLEMINSON said the use of television as a medium for visual education was important. The C.V.E. must consider what suggestions it could make for getting its story across to the public through that medium while providing real entertainment. Mr. Carrington had suggested going through the whole story of a building in a lively form, and he thought this might be worked out with Major Clough Williams-Ellis's co-operation.

It was disappointing, he went on, that the Ministries could not be persuaded to be more active in furthering appreciation of architecture. The C.I.D. was given £100,000 to spend as it liked and the Arts Council had money to spend on pictures, plays and ballets, but though £400 millions were being spent on actual construction no corresponding financial contribution was made to educate the public in architectural appreciation.

He produced a recent Ministry of Education publication on children's "Local

Studies" (Bishop Auckland), which, he said, did not even mention architecture.

Mr. Cleminson referred to a Rural District Council of 40 councillors, who were all members of its building and housing committees, the chairman of which had said that not one of his colleagues had any proper appreciation of design, and yet without their approval it was not possible to erect even a garage.

Judging for Oneself.

MR. GORDON RUSSELL said that he agreed entirely on the importance of persuading people to look at things. Many people did not look at things at all. They should not be shown things so that they would accept a particular judgment as infallible; it was a case of making them use their eyes so that they would be in a position to make up their own minds about what they saw. He thought the antique craze in this country illustrated the extraordinary way in which people could fail to look at things. Whole books were written about the rarity of particular pieces of glass and furniture, and so on, without any mention being made in a critical way of the relative merits of one old piece from a design point of view. People were impressed only with the rarity of an article, and did not stop to consider whether it was worth making.

He hoped the C.I.D. would be able to collaborate with the C.V.E. in as many ways as possible. He was sure the work being done now would lead them on the right road, but it would have to be on a much greater scale. There must be a higher standard of visual education in schools. In the eighteenth century people saw everything around them, and found it worth looking at. Now little was worth looking at.

Art in Schools.

MR. BIRCH said he was a teacher of art, and there were two aspects of art teaching which he thought particularly concerned the C.V.E.

First, art instruction in most of our schools was not given by specialist teachers. Advertisements for teachers illustrated this point. Girls' schools asked for a teacher of, perhaps, geography, cookery, French—and art (at the end); boys' schools for woodwork, gardening—and art. In some public schools boys had to attend classes and lectures by specialist teachers and the same applied in some grammar schools. One seldom found the specialist in modern and elementary schools. If this deficiency could be remedied a great deal of the work which the Council was striving to do would be done.

MR. DALBY had the greatest sympathy with the last speaker, because he himself spent a good deal of his time going round the country trying to lighten the burden of him and his colleagues. The problem of producing an immediate supply of art specialist teachers was at the present moment insoluble. It was impossible by Act of Parliament, or mere good will, to create immediately an unlimited supply of art teachers for all the new types of schools, just because it was desirable and necessary at the moment. The Ministry was doing its utmost in the way of short and long term planning to attract sufficient numbers of the right type into the art teaching profession.

He believed that art teaching was a vocation. He was sure that the position was improving. Various experiments were being tried out by way of new training schemes. The Ministry was aware of its responsibilities, and he would not like anyone to feel it was not trying to do its job.

The suggestion that the Ministry of Education was spending nothing on architecture and architectural education could be disproved from financial figures, he stated. On the general inference that the Ministry was not doing enough to help people to look at things, he would only say that since 1946 the Ministry had brought up groups of teachers (between 40 and 60) to London each year, and instead of working as on the ordinary type of refresher course they were urged to use their eyes and look at things. The teachers were dispersed around London for a fortnight, and efforts made to ensure that they did in fact see what they ought to see.

LAND, RAINFALL AND POPULATION

Classifications and Averages

THE first three explanatory texts to accompany maps in the 10 miles to one inch (1/625,000) series of planning maps produced by the Ordnance Survey Office have now been published. These texts have been prepared by the Ministry of Town and Country Planning and the Department of Health for Scotland. Great Britain is covered by two sheets, sheet one including Scotland and Northern England, and sheet two the remainder of England and Wales. Land classifications, average rainfall and population are the subjects of these first texts, which help to make the maps fully intelligible to the layman.

One text shows how the agricultural land of the country has been divided into ten categories, ranging from first-class land, such as is largely used for intensive market gardening, to the poorest land—for example, saltings and rough marsh. The areas and percentages of each category of land in every county are given in the text. Lincolnshire is the county with the highest acreage (530,900) of first-class land, followed by Cambridgeshire (274,300), Lancashire (237,000), Norfolk (193,000) and Kent (175,400). Of the Scottish counties Angus (77,200), Berwick (68,700), Fife (59,800) and East Lothian (49,800) have the highest acreages of first-class land.

The rainfall map is based on averages over a period of 35 years, but it also gives information on variability of rainfall. Among other things the explanatory text indicates the significance of this variability from one year to another as well as from place to place.

Population maps, which will number eight in all, and of which six have already been published, show population densities, total changes and changes by migration. The text, in explaining the complications of preparing maps of population movement, warns of the care which must be exercised in drawing conclusions about internal migration.

Other maps already published, for which, where necessary, explanatory texts will be issued later, show, for instance, electricity supply areas, land utilisation, roads, coal and iron, types of farming, and administrative areas. The maps and explanatory texts can be obtained through Ordnance Survey Agents and many booksellers. The maps in most cases cost 5s. per sheet and the explanatory texts 9d.

SOCIETIES AND INSTITUTIONS

R.I.B.A.

Maintenance Scholarships

The Royal Institute of British Architects announce that the following Maintenance Scholarships have been awarded for the year 1950–1951:—

The Ralph Knott Memorial Maintenance Scholarship of £45 to Alan G. Diprose, of London, W.C.1; an R.I.B.A. 4th and 5th Year Maintenance Scholarship of £60 to Colin E. I. Nops, of Welling, Kent.

An R.I.B.A. Howe Green 4th and 5th Year Maintenance Scholarship of £40 to John F. Vergette, of Swansea, South Wales; an R.I.B.A. Hartley Hogarth Maintenance Scholarship of £31 10s. to Geoffrey Hill, of Keighley, Yorks.

The Maintenance Scholarships previously awarded to the following candidates have been renewed:—

H. W. D. Burgess (Technical College, Cardiff—R.I.B.A. Houston Maintenance Scholarship of £125 per annum). J. M. Phillips (University of London—R.I.B.A. Houston Maintenance Scholarship of £125 per annum). D. N. Sutcliffe (Northern Polytechnic, London—R.I.B.A. Houston Maintenance Scholarship of £125 per annum); J. B. Crowther (Technical College, Cardiff—R.I.B.A. Houston Maintenance Scholarship of £125 per annum); D. G. Potter (Polytechnic, Regent-street, London—R.I.B.A. Houston Maintenance Scholarship of £125 per annum); H. R. Brady (University of London—*The Builder* Maintenance Scholarship of £68 per annum); Miss K. Sanders (Birmingham School of Architecture—A.G.B.I. Maintenance Scholarship of £98 per annum).

SHEFFIELD, SOUTH YORKSHIRE SOCIETY

Annual Report

A DISCUSSION on ways and means of encouraging the use of stone for building in the Peak District was one of the activities during the past year of the Sheffield, South Yorkshire and District Society of Architects and Surveyors, which is mentioned in their sixty-second annual report. The report also states that a committee has now been appointed further to consider this question.

The Society has suffered the loss by death of two of its best known members during the year—Mr. C. S. Sandford, F.R.I.C.S., who at the time of his death was President of the Society, and also Mr. C. M. Hadfield, F.R.I.B.A., who was President of the Society from 1928-30.

Three lectures have been given during the session: the first by Mr. R. Gardner-Medwin, B.Arch., A.R.I.B.A., on "The Lesson of Edinburgh."; the second by Mr. George Mansell, Hon. Secretary, The Art Workers' Guild, on "Inscriptional Lettering in Architecture"; and the last by Dr. Ronald Bradbury, Ph.D., F.R.I.B.A., A.M.T.P.I., the City Architect of Liverpool, on "The Technique of Local Authority Housing."

The Council has dealt with a number of matters during the year, among which were provisional estimates now required by local authorities for new buildings, and architects' fees in connection with applications for building licences; the question of providing opportunities for architectural education for assistants in offices and students who are not taking the full-time School course at the University is being considered.

The following were elected for the session 1950-1951: Mr. R. Cawkwell, F.R.I.B.A., President; Mr. S. E. Minns, A.R.I.B.A., Vice-President; Mr. J. Mansell Jenkinson, F.R.I.B.A., Hon. Treasurer; and Mr. H. B. S. Gibbs, F.R.I.B.A., Hon. Secretary.

THE MODERN APPROACH TO SITE SURVEYING

The Importance of Simplicity

By GORDON TOMALIN, M.I.Struct.E.

DURING the past quarter of a century many new developments have taken place in the design and construction of surveying instruments and in the approach to carrying out a site survey, but in these days architects, engineers and surveyors are, perhaps, more directly concerning themselves with the general need for all-round economy. They are united in a common desire to carry out careful investigation into "how the job is to be done" from the construction point of view. The measuring of a site, the taking of adequate levels and the study of the relationship between survey lines and the outline of the new structures, is realised as an important factor not only in the preparation of plans, elevations and sections of the new work but also in the estimating stages and in the final positioning of the building within the site.

Until a few years before the last world war many architects were content with an approximate survey carried out by an assistant from their office. So soon, however, as the contract became operational it was obvious that a far more accurate survey would be required and a further survey had to be carried out to ensure that the new construction work would fit the site. The individual chosen for the job was invariably sent to the site ill-equipped and confronted in many instances with the problem of making the survey with the aid of a labourer, who, although honest of intent, had little idea of what was going on and often a despairing vagueness as to how much of the "ring end" of the tape he should wrap around his hand as each dimension was taken. Inevitably, back in the drawing office, many miles from the site, the measurer was confronted with a variety of problems when dimensions failed to fit up. Repeated visits to the site resulted.

In adopting out-of-date methods architects and engineers concerned with the survey and the position of buildings experienced delays and difficulties in agreeing building lines and frontage lines with district surveyors or local authorities. In attempting to set up these lines it was often found that the surveyor had adopted lines and methods of location demanding the most astute mathematician to resolve and relate to permanent control points.

The importance of a well-planned survey is to-day a recognised essential at the preliminary stages as well as throughout the whole of the construction works, and therefore site surveying calls for a quality of complete understanding of "how the job is to be done." This means a careful probing of the architect's intentions, a searching for the background of his lines of planning, a sifting of the points controlling the position of his new structure and its relationship to adjoining buildings and to those on the opposite side of the street. Architects do not just draw any old line in the planning of a building. Information as to how they link up their scheme of planning with existing control points at the site is available and the site surveyor should closely study these matters before formulating his first approach to making the survey.

Next, the site surveyor should consider the engineer's work on the job and seek the best way in which the survey may be produced rendering dimensions and lines in such a manner as to minimise the calculations necessary to position stanchions, columns, foundations and the host of other details.

Then a thought for the quantity surveyor, assisting as far as possible in presenting all details of level variations within the site so that he may more easily merge all information arising from the architect's and engineer's drawings in order to produce an accurate bill of quantities.

Last, and by no means least, the surveyor should consider the actual building work to be carried out by the contractor, giving thought to how the work is going to be set out and the order in which the work will proceed.

Each and every one of these aspects of the problem should be thoroughly explored before the surveyor reaches a final decision upon the lines he will set up on the site for his survey operations. No ordinary traverse survey will meet these requirements, at least, it is rare if it does. It can only be through a careful study on the lines indicated that the surveyor can produce a site survey that can save time for everyone and, incidentally, reduce the costs of the work as a whole.

It follows that the surveyor must have with him a practised staff of assistants, men who are using surveying equipment continuously. In these days, when surveys are required in a variety of places, the team should be mobile and self-supporting, carrying with them all instruments and gear necessary for any type of operation.

Simplicity the Aim.

Bearing in mind the present-day trials and tribulations in architects' and engineers' offices, their staffing problems and their desire to operate as economically as possible, the surveyor should aim at producing a drawing devoid of all complexities. The odd angle showing degrees, minutes and seconds looks highly technical and impressive but those for whom the drawing is intended are more receptive to a drawing giving all the essential information in simple form. The angle of 90 degrees is one which is understood readily by everyone in the drawing office or on the site and the surveyor should show the fundamental points of control related to 90-degree lines, even though these may not necessarily have been lines upon which the survey was made. The ideal line sought and used as a survey line is one which is parallel to the new construction. Using 90-degree lines to this initial one is an additional help.

Modern site surveying requires a wide knowledge of construction and setting out. Additionally, a sound experience in mathematics and trigonometry is essential, for without these the approach to the final simple production of the modern survey becomes difficult, indeed, near to impossible. Knowledge of construction problems enables the surveyor to give proper thought to the position of hard markings outside the perimeter of the site, markings showing the intersection of survey lines, etc. These hard markings are of vital importance to those who build, for often all relative existing buildings surveyed have been demolished by the time the new works start, or shortly after. Permanent markings within the perimeter of the site are known to be fair game for the bulldozer or mechanical shovel and should be avoided.

Modern surveying equipment undoubtedly plays a big part and helps the specialist surveyor in arriving at the degree of accuracy required, but, in the writer's view a more important factor is arriving at how the survey is to be done so that the construction work which follows can be more easily carried out. Indeed, in a fast moving team the man of importance is he who indicates which dimension is required and knows how to book it in the build-up for setting down the survey. Odd angles and oblique lines which are parallel to no particular points are no more than obstructions in the search for that simplicity which is a prerequisite of speed and accuracy. The provision of 90-degree lines and the ironing down of the complex to the level of the junior draughtsman and the setter-out form the background of thought for the production of the final survey drawing, on which it should be possible to work using only simple arithmetic.

Little mention is made of the part played by the site surveyor in building work to-day. The layman sees construction work going on all around, little realising the careful measuring and calculations called for in the preliminary stages. Like Meccano each little piece fits into its place to form the whole, which, in its turn, must fit the site. The sword of Damocles is ever suspended over the head of every site surveyor, for he may make a million correct measurements for little praise, but let him make one mistake!

Familiarity with Instruments.

Those hoping to become surveyors of sites should study at the technical colleges or institutes and learn the basic principles of surveying. The "traverse" methods are essential as a background to surveying of any kind. Every effort should be made to become adept in using instruments, for a sound knowledge of what they offer often saves valuable time.

Surveying is a profession in which one never stops learning. When the beginner has carried out a number of field surveys, normal to training, and feels that he knows it all (and we all do at some time in our struggles) he should try setting out some buildings from a survey and layout plan on a site. It will be in this field that he will find so many problems the solution of which are in no text books. It will be here, on the site, that a beginning of an appreciation of modern site surveying will arise. Lorries, bulldozers, cranes, piles of materials are but a few of the obstructions confronting the theorist. Here will come the understanding of the thought and planning necessary in setting up survey lines, and the enormous value of the 90-degree angle. The student will be grateful for his earlier thorough training in the manipulation of instruments and in this harder field will see clearly that a traverse survey of acreages for the purpose of obtaining areas is not the be-all and end-all of the making of the modern surveyor; the wide open spaces to be surveyed with theodolite and chain become a comparative holiday compared with the problems of the precise survey of a London site where eighths of an inch are of the utmost importance.

We have come a long way to the realisation of the need for simplicity and from it should always be remembered that the modern approach to site surveying carries a banner on which are written the words "Think of those who follow."

LETHABY'S "MEDIÆVAL ART"

A Revised Edition

Reviewed by J. G. NOPPEN

"MEDIÆVAL ART" was published by Duckworth in 1904; reissued in 1911, and a new edition, revised and corrected by the author, appeared in 1912. The book has been out of print for at least 25 years. It was a pioneer work; the outcome of original thought, and the herald of a new epoch in the study of its subject.

In such works, Lethaby continues to live: a vivid spirit of inspiration. He has woven himself into "Mediæval Art" as he has into "Philip Webb."* Both are English classics of the first rank, and the most remarkable books of their kind. "Mediæval Art" has widened our understanding of art in the past, clearing and lighting a field, knowledge of which had long lain in the shade.

Few men have ever won prestige equal to that enjoyed by Lethaby, and retained it unbroken throughout a life that exceeded by a few years the allotted span. His numerous friends, deciding that so great a man ought to be honoured while still alive, arranged to celebrate his 65th birthday by what was possibly the most wonderful tea-party on record.

It was a magnificent tribute paid to a great man by those who signed themselves the "friends whom you have made and kept during your life. Among us are colleagues and pupils to whom your work and your teaching have been an inspiration which they take pride in acknowledging . . . . to you, art has always been a single continuous expression of the highest human thought; and your energies have been devoted, not only to preservation and appreciation of the work of past ages, but to bringing art into living contact with the life of the present day . . . . and we ask you to accept our assurance that your influence lives and that your work has not been in vain."

The friends who thus addressed him were led by the late Lord Crawford, and Bishop Ryle. They included almost everyone eminent in the world of art. They were some 400 strong, and among them we find —picking out a few at random—Collins Baker, Anning Bell, John Bilson, George Clausen; Guy Dawber, Lionel Earle, Arthur Evans, George Frampton, Kruger Gray, Charles Holmes, St. John Hornby, Edward Johnston, Robert Lorimer, J. W. Mackail, Eric Maclagan, Philip Norman, Beresford Pite, E. S. Prior, Arthur and Bernard Rackham, G. Bernard Shaw, Halsey Ricardo, F. W. Troup, William Weir, Thackeray Turner, Douglas and Sydney Cockerell, T. M. Rooke and others. Those named are but a few of the many personal friends through whom, among others, his influence has been spread afar, not only in this country but abroad. In fact, it has been said that some foreign countries were before Lethaby's own in recognising his quality, particularly as a teacher.

His Influence on Thought.

The depth and extent of Lethaby's influence upon thought, especially in the sphere of art, will be the better understood as wisdom grows. Like Socrates, he was intellectually far in advance of his contemporaries. The late Sir Reginald Blomfield said, "Lethaby himself was above us . . . . a man with high ideals and a high range of thought, one living on the highest plane."

The occasion was a meeting held in Lethaby's honour at the R.I.B.A., a few months after his death. Sir Eric Maclagan also spoke, and described "Mediæval Art" as "that wonderful book . . . . one of the most remarkable books ever written in the English language." It is a book that had no predecessors, and can never be superseded. It sprang from the brain of the author as Athena from the head of Jove.

We may, therefore, feel curious when offered a new volume called "Mediæval Art, by W. R. Lethaby, revised by D. Talbot Rice."† The reviser is Professor of the History of Fine Art at Edinburgh University. Now Lethaby regarded the very idea that Fine Art was something superior to other art not only as fallacious but pernicious and one of the causes of our artistic poverty. But let us see what has happened.

We are told in the preface that the reviser was "confronted with two alternatives, either to make as few alterations as were compatible with bringing the book up to date, or to rewrite it almost entirely in order to avoid its somewhat confused arrangement." He chose the former to save "the freshness, originality and enthusiasm which were so characteristic of Lethaby, and which constituted no small part of the book's merit." We must charitably believe that the reviser did not realise his amusing impertinence; and that a limited imagination allows him to step in where another, better endowed, might fear to tread.

The Classic Quality of the Book.

The classic quality of "Mediæval Art" is given by the genius which brought together so concisely the varied manifestations of art through the ages; pointing their interrelation, as well as their beauty and wonder; illuminating the story with descriptive passages of high poetic worth. To interfere with the text of so noble a work is a crime. The reviser's preface seems rather confused and a little contradictory. There is that about it which suggests that the reviser feels a call for some apology. For, after doing his best on pages XI and XII to show how badly Lethaby's book needs his attention, he adds, on page XIII, a few words of praise; but quickly recovers his form.

In the preface's last paragraph but one he insinuates that the illustration of the book has been improved. It has not. Among a score and more of the originals that are missing is Lethaby's beautiful drawing of a capital (his frontispiece). The rest were one and all of importance; whereas the absence of those added by the reviser would be no great loss, and a few, particularly plate 15, would be more suitable elsewhere. The charming drawings of Lethaby's own, with which he liberally illustrated his book (figures in the text) have been sadly weakened and vulgarised. Mark especially the terrible treatment of his sketch of St. Mary's Soissons (Lethaby's fig. 64, the reviser's fig. 59). But what can be said of the reviser's plate 43? This is from a drawing by Lethaby of the arms of Guy de Montfort, in a window of Chartres cathedral. In Lethaby it has a modest "W. R. L. del" in the bottom left hand corner. This has been omitted by the reviser, and in the list of plates it is attributed to one Etienne Houvet. It is hard to guess how such a mistake could occur.

Much of the freshness and originality of the author has been torn out of the book, and much art-talk of a kind that Lethaby despised has been intruded, often with no clear indication that the passage is not from the pen of the Master. The following is an example. Lethaby wrote "The eastern wars and the great iconoclastic dispute broke the tradition of the Hellenesque Byzantine style." Such a sentence encourages a line of thought that might lead an intelligent student to interesting and fruitful research, and at length to the forging of the links between that and the period Lethaby mentions in his next sentence which reads: "When there came a revival in the arts the style is so changed as to call for a distinct name—secondary Byzantine may serve our purpose, but I believe that Armenian Byzantine would express the facts." This valuable passage has been replaced by the following: "During the iconoclast controversy (726-843) figural art was forbidden in the central Byzantine area, but a certain amount of building was done, and decorations in mosaic of a non-representational character were put up. Of the buildings, the church now known as Kalendar Djami at Constantinople may be cited as an example, and of the mosaic decorations the fine cross in the eastern apse of St. Irene in the same city serves to show that good technique was not forgotten. A taste for figural work was, moreover, probably preserved in secular art, for with the end of iconoclasm, Byzantine art saw a period of renewal and revival which is, in many ways, to be described as a renaissance of the Hellenic spirit. It was, in fact, Hellenesque in the truest sense of the word, and much of it was not only of very fine quality, but was also marked by that idealism and true beauty which is always associated with the name 'Greek.'"

Such trivialities have little meaning, or interest, and are likely to weary the reader; but they serve to show what the reviser deemed "compatible with bringing the book up-to-date."

A particularly bad example of the many unnecessary alterations occurs on page 120 of the new volume. Lethaby began a paragraph, "More than the vaults themselves, the French way of staying them with flying buttresses was characteristic of the progress of Gothic." The sentence is perfectly constructed. Each word and phrase is given its right priority, and the rhythm carries the reader smoothly and firmly to the writer's point. Nevertheless, the reviser has rewritten it as follows: "But more characteristic of the progress of Gothic than the vaults themselves was the French way of staying them with flying buttresses." This is poor writing; the nature of the statement is changed, and the rhythm destroyed.

After a reference by Lethaby to Alexandria, Constantinople and Ravenna, the reviser adds: "In figural work, however, Alexandria was distinguished by a very idealistic manner, showing close influence of the Hellenic style." (p. 26). Lethaby's notice of three tombs by Beauneveu (p. 170) is extended by the following: "That of Charles V is distinguished, but the others are in rather a monotonous style." Another addition on the same page (the last three lines) is not quoted out of sheer compassion.

* First published in *The Builder*, 1925.

† Thos. Nelson and Sons, Ltd. (30s.)

Lethaby understood mediæval art as no other has even unto this day. He was chiefly concerned not with its facts but with its nature. His book is philosophical. Revision has destroyed much of its original strength, and its character has been changed by the emphasis given to facts—knowledge at its lowest term. As Lethaby left it, the book is a classic. The new one is a mutilated affair similar to a mediæval church which has been drastically restored. We can but feel that the reviser has been bold where those who knew Lethaby would not dare to tread. The publisher's advertisement reminds us of Horace who, if our memory is true, remarked:

. . . *leonem*
Parturiunt montes nascetur ridiculus mus.

Let us hope that the mountains' ill-starred efforts may be taken as a warning by anyone tempted to meddle with other of Lethaby's works.

INQUIRY BUREAU

A Leaking Water Pipe

Q.—In my house the earthenware pipe which connects the stench pipe to the main drainage pipe is cracked or broken, as there is a leakage of water. I have tried to mend it with cement and water-proofed painted rag bound around it, but the leak still persists. Could you please tell me which is the best method of mending the earthenware pipe permanently. At the same time, could you inform me whether there is anything detrimental to the house, or foundations, when flowers are planted alongside the house? The soil is gravel, and approximately four inches below the damp course.

A.—From your description it appears that the collar to the earthenware pipe is broken. The earthenware pipe at this point is usually a bend and in your case requires replacement, a job which your local builder will attend to. With regard to your query as to whether it is detrimental to a structure to grow flowers close to brickwork, the answer is :— If the soil is below the damp-proof course and never allowed to rise above it, no harm can be done. V. C. A.

STONE MASONS

Apprenticeship Examination, 1950

THE London Association of Master Stone Masons is arranging the annual practical examination for London Masonry Apprentices. The examination will be held this year on Saturday afternoon, September 16, at 3 p.m., at the works of Messrs. Webber and Corben, Ltd., Nelson's Row, High-street, Clapham, S.W.4, and it is expected that some 70 boys will be taking part.

The boys will be classified into five classes, according to the length of the time they have been at the trade, and they will be judged not only on the results of a two-hour practical test, but also on their school report. Suitable prizes are to be awarded to those attaining the necessary standard of efficiency, and the prize distribution will be held at the Offices of the London Master Builders' Association, 47, Bedford-square, W.C.1, on October 3, at 2.30 p.m.

Arrangements are being made to provide a tea after the examination and the opportunity will be taken of giving the boys an appropriate talk. It is also proposed to give all the boys taking part a trip to Bognor on September 19.

It was found in the years before the war that these annual examinations and outings proved very effective in stimulating a keener interest in the craft and also a competitive spirit between boys from different firms, and it is the aim of this Association to endeavour to build up once again this enthusiasm among the present boys in the trade, as not only is it felt that in this way more boys may be encouraged into the trade, but that that very desirable state of mind—pride of craftsmanship—will be fostered and promoted.

L.M.B.A. MAP, showing location of Technical Colleges offering building courses in the London region.

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construction-design
= Helicon
design+construction
= Helicon

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M-W.50

BUILDING COURSES IN THE LONDON REGION

L.M.B.A. Memorandum

TO assist those seeking a suitable course of study in one of the many branches of work connected with the building industry, and also to encourage others who may be contemplating taking up a course of training, the London Master Builders' Association has issued a memorandum which gives consolidated information relating to building courses which are available at technical colleges and schools in the London region.

The memorandum gives details of the courses which will be available from September this year onwards, and is divided into three main sections. Part 1 deals with pre-apprenticeship courses, Part 2 with craft courses and Part 3 with technical and administrative courses. There is also an appendix giving details of the addresses, telephone numbers, etc., and a useful map giving the locations of all the colleges running building courses. It is intended that a revised version of the memorandum will be issued in July of each year so that the information may be kept up to date.

Mr. R. R. Costain, president, L.M.B.A., recalls, in a circulated letter introducing the memorandum, that on his election as president at the beginning of this year he said that he proposed to put technical education and training in the forefront of his interests and activities for the year. He continues :—

"I was convinced that as an industry we have in the past failed to give sufficient attention to this vital aspect of our work and I am confident that we shall never attain the degree of industrial efficiency which the country has the right to expect of us until

we do in fact give far greater attention to the matter."

Mr. Costain goes on to tell employers that with the help of this memorandum they can quickly establish the most suitable course of study for everyone in their employ from apprentice craftsmen to senior managerial and supervisory staff.

SAVINGS ACHIEVED BY DIRECT LABOUR

New Housing Schemes at Wolverhampton

SAVINGS effected by the employment of direct labour on new housing schemes, and the successful working of an incentive system of bonus payments, are referred to in the latest annual report of the Public Works Department of Wolverhampton Corporation. The report, which is signed by Mr. W. M. Low, borough engineer, states:—

Since the formation of this direct building section of the department (April 2, 1947) seven separate housing contracts have been undertaken, involving the construction of 458 dwellings at a total estimated cost of £529,940. In addition, two police houses have been erected by the department in conjunction with contract No. 75, at an estimated cost of £2,852 17s. 2d.

By March 31, 1950, 240 dwellings had been completed and occupied, the annual rate of completion having risen from 50 in 1947 and 89 in 1948 to 101 in 1949.

In January last tenders were invited by the housing committee for the erection, in blocks, of 94 three-storey flats at Warstones-drive, and the estimate submitted by the direct building section of the department, amounting to £119,765 17s. 7d., was nearly £10,000 lower than the nearest tender. Work on this contract commenced last March and satisfactory progress has so far been made with the preparation of the site and the construction of roads and sewers.

Since the last report, contractual costs have been ascertained in respect of contract 73, for the erection of 40 flats at Parkfield-grove, which work was completed in December, 1948. Contractual cost is the sum which would have had to be paid by the Corporation had exactly similar work been carried out by a private contractor during the same period. It is a sum ascertained jointly by an independent firm of quantity surveyors (who are responsible for the measurement of variations) and the audit section of the borough treasurer's department (who are responsible for checking completely the final account, in exactly the same manner as they check the final accounts of private builders working for the Corporation). The comparison of actual cost with contractual cost is the fairest and soundest basis for measuring the economy of the work carried out by the direct building section.

The details of contract 73 are as follows:—

	£ s. d.	£ s. d.
Contract sum		27,765 0 0
Variations as measured by H. Vale & Son, Ltd.		
Additions	7,209 19 2	
Omissions	6,727 12 11	
Net addition		482 6 3
		28,247 6 3
Less variations in P.C. items		841 19 7
		27,405 6 8
Add increase in cost of materials		118 5 4
Increase in wages and Nat. Insurance ...		142 1 3
Contractual cost		27,665 13 3
Actual cost as per Cost Office statement		26,311 18 7
Saving on contractual cost		£1,353 14 8

Incentive Bonus Payments.

Of the incentive scheme in operation, the report states:—

The incentive bonus scheme reported upon in the last annual report has, since its inception in December, 1947, continued to operate smoothly and, in addition to creating a healthy system of competition amongst the men, has done much to increase output and reduce the man-hours required to erect the houses.

The following table sets out the basic wage bill for each contract, together with the additional bonus earned in each case, and shows the progressive reduction in man-hours per dwelling which has resulted from the bonusing of the work:—

Contract	*Basic wages excluding bonus*	*Bonus*		*Average site man-hours*
		Total paid	*Per cent. of basic wages*	
	£	£		
No. 71	16,648	321	1.9*	2,800 per house
No. 72	3,640	119	3.3*	1,430 ,, flat
No. 73	6,543	622	9.5	1,300 ,, flat
No. 74	16,554	1,590	9.6	2,200 ,, house
No. 75	25,952	4,480	17.3	Not completed
No. 76	6,629	917	13.8	Not completed

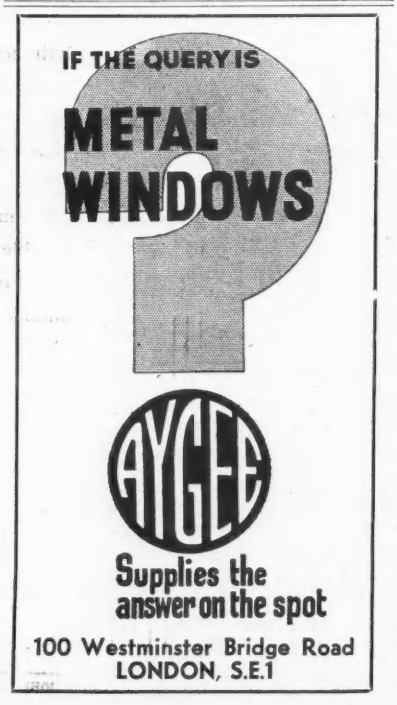
* Bonus scheme applied only for latter part of contract.

The first contract undertaken by the direct building section, which was approved in the first quarter of 1947, comprised 50 houses having an average floor area of 996 sq. ft., and the average final cost per house worked out at £1,226, a saving of £34 per house on the proportionate average figure quoted by the Girdwood Report for a house with the same floor area.

Similarly, for houses completed in October, 1949, for which the average floor area was 1,050 sq. ft., that committee estimated the final cost per house to be £1,321. The equivalent figure for a house having a floor area of 1,009 sq. ft. would be £1,270, whereas in contract 74, which comprised 58 houses having an average floor area of 1,009 sq. ft., which the Department completed in August 1949, the average final cost worked out at £1,172 per house—a saving of £98 per house on the equivalent figure quoted by the Girdwood Report.

Costing.

The report adds: The costing system, which was devised in collaboration with the borough treasurer, and which has been operated by the borough treasurer since the inception of direct building in April, 1947, has continued to be of considerable service to my department in enabling a careful check to be maintained on progress and costs of work. The closest liaison has been maintained between the departments, and I wish to acknowledge the promptitude and accuracy with which costing details have been supplied.



NEWS IN BRIEF

Town Planning Circular.

The Ministry of Town and Country Planning has recently issued Circular No. 93, "Notifications to the Ministry of Civil Aviation of Buildings, Works, Etc., of 300 feet or over."

B.R.S. Digest.

The Building Research Station, Garston, Watford, Herts, have recently issued their Digest No. 20, dated July, 1950, entitled "The Weathering, Preservation and Maintenance of Natural Stone Masonry (Part 1)."

M.o.H. Medal for Abingdon.

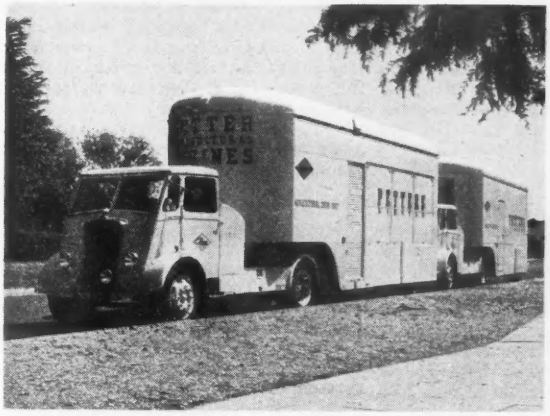
Abingdon Borough Council, Berks, have been notified by the Ministry of Health that they have been awarded the medal and diploma for layout and design of the houses on the Fitz-Harrys estate. The award is the only one to borough authorities in the five counties in the region. The Minister has congratulated the Borough Council and expressed a wish to make the presentation personally on a date to be fixed.

Westminster Libraries.

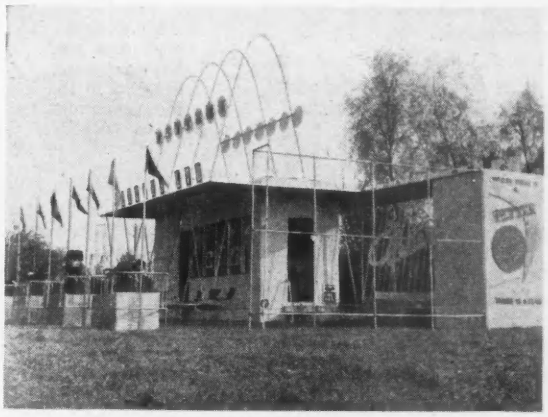
A booklet with illustrations showing the first library buildings erected in the city and interior views of the modern buildings which have replaced them, has been issued by Westminster Public Libraries Committee as an annual report. It contains details of the activities of the City libraries during the past year and records the fact that to Westminster—or rather to that portion of it once known as the United Parishes of St. Margaret and St. John—belongs the distinction of being the first local authority in London to establish a public library under the first Public Library Act of 1850, a library which for 26 years was to be the only one in the Metropolis.

Apprentice Master Scheme, Liverpool.

So successful has been the initial building carried out under the Apprentice Master Scheme in Liverpool that the Corporation Housing Committee is to start another—this time a block of three-storey flats. The Apprentice Masters are in this case Messrs. F. Clark and Son, and the work will start immediately. The first scheme was completed with the Apprentice Masters Messrs. Tysons (Contractors), Ltd., and consisted of a block of flats at the Speke Boulevard, and another block is in course of erection just opposite. Of their work on the flats the Liverpool City Architect and Housing Director (Dr. Ronald Bradbury) says: "They have created a fine workmanlike building, and the standards achieved by all trades compare very favourably with the work done by journeymen."



The pantechnicons on the road.



The show vehicle arranged for display purposes.

Building Science Abstracts.

The Department of Scientific and Industrial Research has recently issued Building Science Abstracts Nos. 1092-1242. These Abstracts, Vol. XXII, No. 8, are published by H.M. Stationery Office, price 2s.

Coventry's Smokeless City Centre.

A proposal to supply heat by means of hot water to buildings in Coventry's central redevelopment area has been approved in principle by the City Council. The decision was made by the Corporation because of the shortage of available gas. A detailed scheme, including the provision of a heating station and underground ducts, is to be prepared. The cost of such heating could not, the council was told, compare with central heating by solid fuel, but this latter method has not been adopted, as the city centre is to be a smokeless zone.

The Gibbons-Gottignies Kiln.

The first Gibbons-Gottignies electrically-heated multi-passage gloss-tile kiln to be put in operation in Britain was demonstrated recently to a party of trade visitors at the Stoke-on-Trent works of J. H. Barret and Co. (1927), Ltd. The circumstances which led to the decision to instal the Gibbons-Gottignies kiln at the Stoke-on-Trent works were explained by Mr. Cyril Carter, chairman of Carter and Co., Ltd., at a luncheon given to the inspecting party at the North Stafford Hotel. The kiln is of Belgian origin and the main advantages claimed for it are quality production, low consumption of electricity, low maintenance costs, simplicity of operation, short firing cycle, and the small shop area required to house a kiln giving a considerable output.

Builder's Visit to Plant Specialists.

On July 22 last, some 20 members of the Builders' Foremen and Clerks' of Works Association visited the Southampton Works of George Cohen Sons and Co., Ltd., specialists in contractors' plant, contractors' tools, and lifting gear. After some discussion on the various types of contractors' tools and lifting gear—including references to the safety and other regulations applicable to the latter—the party visited the workshops, where many types of machines in general use throughout public works and building contracts were shown in various stages of overhaul and assembly. Attention was drawn to the parts where excessive wear was most likely to occur, and the importance of proper care and maintenance in the field was emphasised.

Industrial Finishes Exhibition.

At the Industrial Finishes Exhibition to be held at Earls Court from August 30 to September 7 next, the Council of Industrial Design will show examples of good and bad finishing of domestic equipment and machinery to demonstrate the wisdom of consulting the "finishing" specialist from the outset when planning a new product. Another simple display is intended to help designers and technicians to avoid many costly pitfalls in the early planning stages of production. Other parts of the stand will display some new and interesting finishes.

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EXPORT ENQUIRIES INVITED

MOBILE SHOW VEHICLES

To Visit Industrial Exhibitions

A SERIES of new type mobile show vehicles have recently been constructed by Messrs. Petters, Ltd., of Staines, Middlesex. They have been specifically designed for visiting and exhibiting at agricultural and industrial exhibitions.

At present they are touring Great Britain and at the close of the season they will be transported to America, where, in conjunction with Associated British Oil Engines Incorporated and their agents, a tour of some 8,000 miles has been arranged.

The unit will be exhibiting the Petter diesel and petrol engines ranging from 1½ to 27 b.h.p., and, for the first time, this tour will give the American people an opportunity of seeing these power units demonstrated.

The unit will visit a number of agricultural expositions, and in some cases agents of Associated British Oil Engines Incorporated are to arrange separate demonstrations in the small towns for the benefit of local townsfolk.

The unit consists of two pantechnicon type vehicles each powered by a traction unit. Each pantechnicon is finished in a matt primrose colour with suitable chromed metal lettering. The first forms the show vehicle, whilst the second is used for storage of engines and exhibition equipment, and includes the crews' living quarters.

The show vehicle contains a drawing illustrating the seasons, specially executed by Eric Fraser, and opposite is a grille feature containing illuminated photograph boxes illustrating engine implements. The walls are finished in anodised duralumin, and the ceiling is of egg-crate construction with concealed lighting from above. Steps lead up to a reception office with built-in cocktail cabinet and seating accommodation.

Alkali Inspector's Report.

The annual report of the Minister of Health's chief alkali inspector which has just been published discloses that research is now in hand to determine the effect at ground level of discharges of sulphur dioxide from high chimneys and to investigate cheaper and more practicable methods of elimination than those at present in use. Experiments have also been carried out to reduce drizzle from water cooling towers, about which there has been much complaint.

TRADE NEWS

An Appointment.

Mr. A. S. Chatwin has been appointed a director of Diespeker and Co., Ltd.

Adjustable Door Frame Brace.

The Steel Scaffolding Co., Ltd., 82, Victoria-street, London, S.W.1, have recently issued a brochure on the "Big Ben" door frame brace. The brochure is designed to show the saving which, the company claim, is entailed by the use of this brace and one section is devoted to the method of using it.

Angle-Dozer Attachment.

The Chaseside Engineering Co., Ltd., Station Works, Hertford, Herts, inform us that they are now able to accept orders for an angle-dozer attachment for the Chaseside mechanical shovel, which can be fitted not only to the ½- and ¾-cu. yd. machines but also to the 1-cu. yd. (760 litres) machine. The value of this attachment is that it will doze at 35 degrees on either side of the machine or straight ahead, as required. It may be fitted to a machine without the removal of existing parts.

New Trade Association.

The formation of a new trade association of manufacturers of electric lighting and allied equipment is announced by Mr. A. Stanley Shier (a director of Thorn Electrical Industries, Ltd.), who was elected chairman of an acting committee for this purpose at an informal meeting held on July 12. The meeting was called in response to requests from various firms in the lighting equipment industry who feel that the present trend of events in the field of distribution indicates the need for a new association whose policy would embody the principles of the Fair Trading Code, whilst avoiding exclusivity agreements. The new association will be called "The National Association of Manufacturers of Electric Lighting and Allied Equipment."

A New British Heavy Tractor.

A new and powerful Class I heavy track-type tractor designed for industrial, earth-moving and heavy agricultural work will be introduced to world markets by January, 1952. Known as the "Vickers" tractor, it will weigh between 14 and 15 tons and will be fitted with a Rolls-Royce six-cylinder diesel engine of approximately 180 horse power. Prototype models of this new British tractor have been subjected to exhaustive testing in the last twelve months, and during 1951 pre-production machines will be supplied to operating companies for trials under practical conditions. Full production of this model of the Vickers Class I tractor will begin in January, 1952, and it is planned to work rapidly up to a production rate of 500 a year. It will be manufactured at the Elswick and Scotswood works of Vickers-Armstrongs at Newcastle-upon-Tyne. The production of the necessary ancillary equipment has been planned to synchronise with the tractor programme. Abridged specifications will be released shortly.

Jack Olding and Co., Ltd., announce that they have been appointed the sole world distributors for the Vickers tractor and ancillary equipment and, at the same time, regret to announce that they are terminating their association with the Caterpillar Tractor Co. The supply of spare parts and servicing of Caterpillar tractors will continue to be carried out by Jack Olding and Co., Ltd., until such time as the Caterpillar Tractor Co. has made alternative arrangements.

School Kitchen Equipment.

The latest gas-operated large cooking appliances made by Radiation, Ltd., of 7, Stratford-place, London, W.1, have been installed in the Fawcett School, Trumpington, Cambridge, the first new modern school to be opened at Cambridge since the war ended.

Firm's 5,000th House.

On July 21, the 5,000th "Wates" permanent non-traditional house to be constructed in this country since the end of the war was handed over to the Lord Mayor of Birmingham, who, on behalf of the City Corporation, in turn handed over the house to the prospective tenant. The ceremony took place on the Elms estate, The Radleys, Sheldon, Birmingham. The Lord Mayor was welcomed by Mr. Ronald Wates, J.P., a director of Wates, Limited, who said that his company expected to hand over the remaining 164 houses comprised in this contract at the rate of at least six homes per week.

Metal Lathing for Plasterwork.

The Expanded Metal Co., Ltd., of Burwood House, Caxton-street, Westminster, London, S.W.1, has recently published a booklet entitled "Expanded Metal Lathing for Plasterwork." The booklet, which is very well produced, includes chapters on the advantages of expanded metal lathing and plaster construction, the plaster encasement of steelwork, and external cladding. It also includes a considerable number of excellent illustrations showing the methods of using this type of construction and photographs of buildings in which it has been used. Copies of this booklet can be obtained from the above address.

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Company's Change of Address.

We have been informed that Shires and Co. (London), Ltd., manufacturers of sanitary equipment, are now established, and in full production at their new works—Greenbottom Works, Guiseley, Yorks.—to which all future communications should be addressed. Tel: Guiseley 1041-5. Telegrams: Sypho Guiseley.

Factory Painting.

Messrs. John Hall and Sons, Ltd., have recently published a new booklet entitled "Factory Painting for Increased Productivity." The object of this booklet is to outline the ways in which careful use of colour can improve the health, morale and production efficiency of employees, and so be of service to managements seeking greater productivity.

Pottery Through the Ages.

Doulton and Co., Ltd., of Doulton House, Albert Embankment, S.E.1, have recently published a booklet entitled "Pottery Through the Ages." This is a reprint in booklet form of the series of 22 illustrated pages which appeared during 1948 and 1949 in the architectural and pottery journals. They dealt briefly with the principal trends and events in the history of the craft—from the caves of early man to the first industrial kiln. The text is little altered, but the oil paintings by Gordon Nicoll, R.I., are now beautifully reproduced in full colour. It is hoped that this booklet will make still better known the long and honourable history of the potter's craft.

"Castellated Construction."

The United Steel Companies, Limited, 17, Westbourne-road, Sheffield, 10, have recently produced a booklet on behalf of their subsidiary company, Appleby-Frodingham Steel Company, Scunthorpe, on the subject of "Castellated Construction." Full details are given in the brochure of the system, which, it is claimed, effectively reduces the deadweight of a structure whilst maintaining or increasing the strength of a given span. Copies can be obtained from the Construction Department, Appleby-Frodingham Steel Company, Scunthorpe, Lincs, any of the district sales offices of the United Steel Companies, Limited, or from the address given at the beginning of this paragraph.

New Uses for Aluminium.

Some new uses for aluminium are announced in the July issue of "Aluminium News," a publication produced regularly by Aluminium Union, Ltd., in Canada. A recent development in Norway, it states, is the production of bath tubs made of corrosion-resistant aluminium finished with stove enamel. This development, it is suggested, is significant because of the possibility of using stove-enamelled aluminium for other purposes, such as the manufacture of refrigerators. A British product mentioned is patterned after a large-size dust-pan. Equipped with a stout wooden handle, it is said to be useful in the kitchen for sliding under a hot bowl or dish to remove it from the oven without burning one's fingers. Yet another use for this light metal has, apparently, been found by an American firm of gun makers which has produced several prototype 0.45 calibre automatic pistols of high tensile strength aluminium alloy. The aluminium pistol, said to be as efficient as the old models, weighs only 26½ ounces against the previous 40 ounces.

Plastic Wall Paint.

The effective results which may be obtained by the application to interior walls of their new product Alabascote, a plastic wall paint, are described and illustrated in a booklet entitled "Beautiful Walls," which has been issued by Alabastine Co. (British), Ltd., 16, Ashmole-street, London, S.W.8. Alabascote, it is claimed, when applied, remains plastic long enough to enable the decorator to work into relief almost any design or pattern. The surface dries rock hard and may be painted and toned in any choice of colours.

A Universal Tool for Industry.

Portability is one of the main features of the Hydroram, a universal tool, manufactured by Chamberlain Industries, Ltd., Staffa-road, Leyton, E.10. The unit can be operated by one man and can pull, press, lift, bend, clamp and spread, giving, it is claimed, approximately 200 times greater thrust than can be obtained by using the human hands. The power source is an hydraulic ram developing a thrust of five tons at an internal pressure of over 5,000 lb. per square inch. It has a 6-in. stroke and will operate at any angle.

Concrete Block Construction.

A demonstration of the "Dri-Crete" system of construction was recently given at the summer meeting of the "Dri-Crete" Association in Cambridge. The system consists of precast interlocking concrete blocks which are erected without mortar. One feature of the demonstration was the construction of a wall by three men, who laid the equivalent of 3,000 bricks in approximately three and a half hourss. The system is claimed to be ideal for farm buildings, garages, bungalows or walls, and a recent development was the construction of a pair of houses in "Dri-Crete" for the Newton Aycliffe New Town Corporation.

THE SCOTTISH BUILDER

NEW BUILDINGS

Cambuslang.—Plans in hand for the reconstruction, etc., of the Post Office buildings, Hamilton-rd., for which the architect is Walter Henderson, 1, Chantinghall-rd., Hamilton.

Chapelhall.—Lanarkshire C.C. is to erect at the Hannilburn housing site a new housing scheme, No. 3, consisting of 124 houses, for which plans are in the hands of Mr. William Brownlie, 191, Ingram-st., Glasgow, C.1.

Glasgow.—Plans are in the hands of Mr. T. Schofield, The Cottage, Nazarine College, Harlet, for a new church, etc., at Govan area.

Glasgow.—Corporation is to have new classrooms and other additions carried out at the Govan senior secondary school (annexe), Ardshill-rd., Govan, for which plans are to be prepared by Mr. John MacNab (F.), architect, 129, Bath-st., Glasgow, W.C.2.

Glasgow.—Plans are to be prepared for reconstruction scheme, alterations and additions at the Bank of Scotland, Charing Cross, West, for which the architect is F. Durward, Bank of Scotland Chief Architect, B.O.S. Head Office, Edinburgh.

Greenock.—Plans are to be prepared for a new housing scheme at Maukinhill, and for which the architect is R. L. Rankine, Master of Works Offices, Municipal-bldgs., Wallace-sq., Greenock.

Lanarkshire.—Plans are to be prepared for new buildings at Crosshill-rd. site, Strathaven, for which the architect is John N. Rankine, 30, Crosshill-ave., Strathaven.

Larkhall.—Plans to be prepared for extension to the Caledonian-rd. hosiery factory by W. Walker & Co., Caledonian-rd., Larkhall.

Motherwell-Wishaw.—Plans are to be prepared for building scheme at the Marbles-rd., for which the architects and quantity surveyors are Cowie & Millar (F.), Oakfield-chbrs., Motherwell-Wishaw.

Motherwell-Wishaw.—Plans are in the hands of R. I. Pilkings & Co., Ltd., own staff and engineers, Flemington, for extensions at the Flemington engineering works.

Tannockside.—Lanarkshire C.C. is to erect at the Barrshead housing site a scheme of 162 houses, for which plans are in the hands of William Brownlie, 191, Ingram-st., Glasgow, C.1.

FUTURE CONSTRUCTION

PUBLIC APPOINTMENTS

Full details of Public Appointments open will be found in the Advertisement pages of this and previous issues.

CONTRACTS OPEN

For some contracts still open but not included in this list see previous issues. Those with an asterisk are advertised in this number. The dates at the heads of paragraphs are those for the submission of tenders; a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING

AUGUST 14.

*†**Oxford T.C.**—Erection of Bayswater County secondary school. E. G. Chandler, City Architect and Town Planning Officer. Dep. £2 2s. Tenders by September 11.

*†**Plymouth T.C.**—(1) "One Form Entry" Primary School at Barne Barton, St. Budeaux; (2) 7 blocks of 3-storey houses at Whitleigh estate; (3) 3 pairs of shops with maisonettes over and garages at Ham estate, No. 2. E. G. Catchpole (A.), City A., Seymour-rd. Dep. £3 3s. each scheme.

AUGUST 15.

*†**Enfield U.D.C.**—Public convenience at Russell-rd. E. & S., 7, Little Park-gdns. Dep. £2 2s.

*†**Newtown and Llanllwchaiarn U.D.C.**—Four shops, 6 maisonettes over and 2 flats at Dolfor-rd., Newtown. Walter Bond, F.R.I.C.S., Colmore-chbrs., 3, Newhall-st., Birmingham, 3. Dep. £3 3s.

AUGUST 16.

*†**Birmingham T.C.**—Erection of 16 houses (contract No. 146) at Dawberry Fields-rd., Brandwood Park estate, Kings Heath. H. J. Manzoni, E. & S., Civic Centre, Birmingham. Dep. £2 2s.

AUGUST 18.

*†**Bedfordshire E.C.**—Adaptation to existing buildings to provide school accommodation, Henlow R.A.F. Camp. County Architect, Bedford.

*†**Cambridge T.C.**—56 flats at Newmarket-rd. (West). B.E. & S., Guildhall. Dep. £5 5s

*†**Maidstone T.C.**—28 houses at Shepway Farm estate. B.S., Palace-ave. Tenders by September 2.

AUGUST 21.

Manchester T.C.—Conversion of 135, Lapwing-la., West Didsbury, into hostel for girls. City A., Town Hall. Dep. £1 1s.

Manchester T.C.—Conversion of dining-room and kitchen into classrooms at Yew Tree sec. school, Wythenshawe. City A., Town Hall. Dep. £1 1s.

*†**Southampton C.B.**—Pair of houses Timsbury and 2 pairs at Otterbourne. Boro' Architect. Dep. £2 each. Tenders by September 15.

*†**West Sussex C.C.**—Improvements to sanitary accommodation at 5 schools. County A., County Hall, Chichester.

AUGUST 22.

*†**Bucks. C.C.**—Erection of infant school at Water Eaton, Bletchley. County A., County Offices, Aylesbury. Dep. £5 5s. Tenders by September 19.

*†**Bucks. C.C.**—Erection of infant school at Burnham Priory estate, Slough. County A., County Offices, Aylesbury. Dep. £5 5s. Tenders by September 19.

*†**Isle of Ely C.C.**—School, Leverington-rd., Wisbech. R. D. Robson, A., County Architect, March.

AUGUST 23.

*†**Denbighshire E.C.**—Canteen kitchen, etc., Llanrwst Grammar School. G. D. Wiles, County Architect, Wrexham. Dep. £5.

*†**Enfield U.D.C.**—48 flats, Pevensey-ave. F. Lee, E. & S., 7, Little Park-gdns. Tenders by September 15. Dep. £2 2s.

*†**Friern Barnet U.D.C.**—58 dwellings, The Hollies, Oakleigh Park North, N.20. K. R. Smith and W. W. Atkinson, A.A., 10, Bayley-st., London, W.C.1. Dep. £2 2s.

AUGUST 24.

*†**Berks. C.C.**—Additional sanitary accommodation at Abingdon County Modern School. County A., Wilton House, Parkside-rd., Reading. Dep. £2 2s.

AUGUST 25.

*†**Birmingham T.C.**—Civic restaurant at Stratford-rd., Sparkbrook. Secretary, Civic Restaurants Dept., Council House. Dep. £3 3s. Tenders by September 15.

*†**East Suffolk C.C.**—Farm buildings, Hopton, near Lowestoft. E. J. Symcox, F., County Architect, Ipswich. Dep. £2 2s. Tenders by September 15.

*†**Gravesend T.C.**—New riverside café and kitchen at Gordon Promenade. B.E. & S., 6, Woodville-terr. Dep. £2 2s.

*†**Portsmouth City.**—Erection of Paulsgrove primary school. City Architect. Dep. £3 3s.

AUGUST 26.

*†**Bromley T.C.**—Block of flats at Hope Park. B.E., Municipal Offices. Dep. £2 2s.

*†**Salford T.C.**—Rebuilding and extension of "The Homestead," Stott-la. City E. Dep. £3 3s.

AUGUST 28.

*†**Crewe T.C.**—2 shops and 4 houses at Rolls-ave., Totty's Hall estate. Leonard Reeves, A.M.Inst. C.E., F.R.I.C.S., Boro' E. & Architect, Municipal-bldgs. Dep. £2 2s.

*†**Gt. Yarmouth C.B.**—40 houses at Magdalen College estate, Gorleston. B.E., Town Hall.

*†**Hendon B.C.**—Adaptation of Victoria Civic Restaurant, Bell-la., as office accommodation. Boro' E., Town Hall, Hendon. Dep. £2 2s.

*†**Torquay B.C.**—140 houses at Marldon-rd. estate. B.S., Town Hall. Dep. £5 5s.

AUGUST 29.

*†**Southend-on-Sea C.B.**—Extension to freight transit shed at municipal airport, Rochford. E. & S. Dep. £2.

AUGUST 30.

*†**Cardiff T.C.**—Erection of block of 5 shops and flats on Caerau estate. City S., City Hall, Cardiff. Dep. £2 2s.

*†**Lincoln (Parts of Lindsey) C.C.**—Superintendent's House and 2 inspectors' houses at Town Hall-sq., Scunthorpe. Charles B. Pearson & Son (F.), 18, Dalton-sq., Lancaster.

AUGUST 31.

Bolton C.B.—Erection of county prim. school, Breightmet, Bolton. E. & S.

*†**Cambridge Boro'.**—School, Queen Edith's-way. B.S. Dep. £5 5s.

*†**Feltham U.D.C.**—20 lock-up garages at Sherborne-rd., South Bedford estate. E. & S., Lynton House, Hanworth-rd. Dep. £2 2s.

SEPTEMBER 1.

*†**Bedfordshire Standing Joint Com.**—Erection of 2 pairs of police houses on Farley Hill estate, Luton. County A.

SEPTEMBER 2.

*†**Leeds Regional Hospital Board.**—Alterations and adaptations at Fulford Hospital, York. Architect to the Board, 29/31, Eastgate, Leeds, 2. Dep. £2 2s. Tenders by October 25.

SEPTEMBER 4.

*†**Oldham C.B.**—Houses, etc., at Fitton Hill estate. Contract A, 60 houses and 18 bungalows; contract B, 72 houses; contract C, a contract for all the 132 houses and 18 bungalows which make up contracts A and B. Cameron & Middleton, A.R.I.C.S., 32, Deansgate, Manchester, 3. Dep. £2 2s. each for A and B and £4 4s. for C. Payable to Boro' Treas.

SEPTEMBER 5.

*†**Erith B.C.**—Erection of 6 blocks of flats on Lesney Farm estate. John H. Clayton, E. & S., Council Offices, Erith, Kent. Dep. £2 2s.

*†**Rawmarsh U.D.C.**—24 houses at Monkwood estate. S., Council Offices, Parkgate, Yorks. Dep. £5.

*†**Swadlincote U.D.C.**—24 houses at Parliament-st. site, Newhall. E. & S., Bank House, Midland-rd. Dep. £2 2s.

SEPTEMBER 7.

Preston C.B.—Extension to premises at grammar school, Preston. E. & S. Dep. £2 2s.

SEPTEMBER 8.

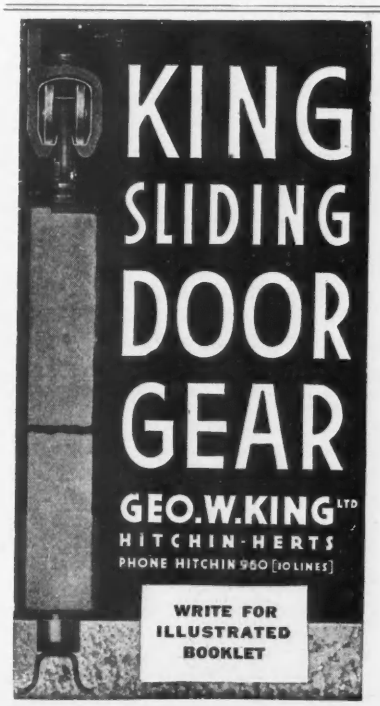
*†**Sunderland C.B.**—Adaptations at Burden Hall, Burden, near Sunderland. Boro' A., Grange House, Stockton-rd., Sunderland. Dep. £2 2s.

SEPTEMBER 9.

*†**Eccles T.C.**—26 houses and 22 bungalows at Ellesmere Park. B.E. & S., Town Hall. Dep. £2 2s.

SEPTEMBER 11.

Chester R.D.C.—Erection of 4 houses at Pulford.



near Chester. F. C. Saxon, F.R.I.B.A., F.R.I.C.S., 2, Stanley-st., Chester. Dep. £2 2s.

***Huntingdon C.C.**—Alteration of existing house at Alconbury Farm Institute and erection of extension with 40 bedrooms, 2 labs, 2 classrooms, dining-room, kitchen, etc. S. J. Hands, A.R.I.B.A., County A., County-bldgs., Huntingdon. Dep. £2 2s.

SEPTEMBER 12.

***Huntingdon C.C.**—Erection of (a) tech. school, and (b) prim. school at St. Neots. S. J. Hands, A.R.I.B.A., County A., County-bldgs., Huntingdon. Dep. £2 2s.

SEPTEMBER 15.

***Durham T.C.**—Erection of 16 bungalows on Sunderland-rd. estate. City E., Town Hall, Durham. Dep. £2 2s.

SEPTEMBER 21.

***Lincoln (Parts of Lindsey) C.C.**—Erection of 3-form entry Junior School, Lincoln-gdns., Scunthorpe. A. Ronald Clark (A.), County A., County Offices, Lincoln. Dep. £3 3s.

SEPTEMBER 23.

***Exmouth U.D.C.**—Building work connected with reorganisation of Dotton pumping station. G. H. Hill & Sons, civil engineers, 51, Mosley-st., Manchester, 2. Dep. £2 2s.

NO DATE.

Droylsden U.D.C.—Erection of 52 flats at Moorside-st. Frank Bradley, A.R.I.B.A., Penny Bank-chbrs., 4, Wood-st., Bolton Dep. £2 2s.

***Wallasey C.B.**—Children's home at Moreton. Boro' A., Town Hall. Dep. £2 2s.

PAINTING, ELECTRIC LIGHTING, MATERIALS, ETC.

AUGUST 24.

***Wembley B.C.**—Interior decorations, Town Hall. B.E. & S. Dep. £1 1s.

AUGUST 26.

***Orpington U.D.C.**—Repair and decoration to 50 houses. Housing Manager, The Priory, Church Hill. Dep. £2 2s.

AUGUST 28.

***Hendon B.C.**—Remodelling of heating installation at Algernon-rd. infants' and junior school. Boro' E., Town Hall, Hendon. Dep. £2 2s.

ROADS, SEWERAGE AND WATER WORKS

AUGUST 16.

***†Taunton T.C.**—Road and sewers at Wellsprings estate. Boro' Housing A., 2, Baldwin-rd. Dep. £2 2s.

AUGUST 26.

Radcliffe Boro'.—Construction of roads and sewers to serve 86 houses and flats on the proposed Wordsworth-ave. housing estate. B.E. & S., Radcliffe. Dep. £2 2s.

SEPTEMBER 9.

***Wycombe R.D.C.**—Roads and sewers at Stokenchurch (Marlow-rd, No. 2) site. J. M. Smith (F.), Architect & S., 100, Easton-st., High Wycombe, Bucks. Dep. £3 3s., payable to R.D.C.

GENERAL BUILDING WORK

(LONDON)

Coventry-st., S.W.1.—Cinema, Flats, etc.—Edward Stone, 20, Berkeley-st., W.1, is architect for proposed newsreel cinema, dance hall, flats and a bank on south side of Coventry-st.

Croydon.—Maisonettes.—T.P. permission granted to Wates, Ltd., builders and contractors, 1258, London-rd., S.W.16, to erect 12 maisonettes on site at Central-hill/Hermitage-rd.

Croydon.—Church Hall.—Spalding, Myers & Attenbrow, F. & A.R.I.B.A., 12, New-ct., W.C.2, have been given T.P. permission to rebuild the St. Aubyn's Congregational Church Hall, St. Aubyn's-rd. with alterations.

Friern Barnet.—Houses.—T.P. comm. have granted permission to Messrs. Harwood Nash & Co., builders, 42, Chase-side, N.14, to erect four detached houses and siting of four detached garages on west side of Oakleigh Park South, N.20.

Lambeth. — Dwellings and Shops. — Housing comm. have approved the final layout for site No. 14, Studley-rd., which will provide 794 dwellings and 14 shops. Sir Lancelot Keay, F.R.I.B.A., Red House, Allerton-rd., Liverpool, 8, is the architect for the scheme.

St. Marylebone.—Flats.—Housing comm. have approved sketch plans, prepared by Culpin & Son, F.R.I.B.A., 3, Southampton-pl., W.C.1, for the erection of 52 dwellings in five three-storey blocks on the Hamilton-terr. site (site No. 14).

St. Marylebone.—Flats.—L.C.C. have given T.P. approval to the layout plans prepared by Louis de Soissons & Partners, F. & A.R.I.B.A., 3, Park-sq. Mews, N.W.1, for the erection of 54 flats on the Abbey-rd./Boundary-rd. site (site No. 6 and extension).

St. Marylebone.—Flats.—Approval to the council's layout plan, prepared by Louis de Soissons & Partners, F. & A.R.I.B.A., 3, Park-sq. Mews, N.W.1, for the erection of 26 flats on the Queen's-terr. site has been given by the L.C.C.

St. Marylebone.—Flats.—T. P. Bennett & Son, FF. & A.R.I.B.A., 43, Bloomsbury-sq., W.C.1, have prepared sketch plans for the erection of 121 flats on two sites at the corner of Wellington-rd. and Circus-rd. for B.C.

Shoreditch.—Flats.—L.C.C. have given T.P. approval to the use of the St. Mary's site for housing purposes and to the layout of the site which provides for 335 flats in 13 blocks. Plans by council's architects' dept.

Sutton.—Conversion.—Surrey County Council proposes to convert two houses in Robin Hood-la. into new welfare centre. Premises eventually to be turned into health centre by addition of extra buildings.

Wembley.—Government Building.—M.O.W. proposes to erect a large building, to accommodate the local staffs of the Ministries of National Insurance, Labour and Food, and the Inland Revenue, on land between Olympic-way and the rear of Wembley Film studios.

Westminster. — Flats. — Housing comm. have accepted the site layout and sketch plans prepared by Riches and Blythin, F. & A.R.I.B.A., 16, Northumberland-ave., W.C.2, for 100 flats as phase A on a proposed new housing scheme on sites adjacent to Warwick-way, and recommend that they be appointed as architects for the first stage (phase A) of the scheme.

(PROVINCIAL)

Anglesey.—E.C. received M.O.E. approval for erection of new arts and craft block at Normal College, and similar block in grounds of George Hostel.

Barnsley.—Brook Motors, Ltd., 57, Norwich Union-chbrs., High-st., Sheffield, received M.O.S. approval for new factory.

Bedlington (Northumberland).—U.D.C. to build 26 houses in Stead-la. Surveyor, W. Hall.

Birmingham.—Trustees of St. Peter's R.C. School, Broad-st., propose additions and alterations to premises.

Birmingham.—Reg. Hospital Board propose conversion of Cheadle Isolation Hospital as maternity hospital.

Bradford.—City A. to prepare plans for wash-house at Rupert-st.—T.C. propose extensions at "Norman Bank," Eccleshill, at £9,570.

Brierley Hill.—T.C. propose conversion of Women's Land Army Hostel at Wallheath as community centre.

Burnley.—R.D.C. propose aged persons' bungalows at Higham and Cliviger.

Cheadle.—R.D.C. propose 16 houses at Tythe Barn, Alton, and 6 at Cotton-la., Cotton; bus stn. at Ashbourne-rd.

Clayton-le-Moors.—U.D.C. propose further 19 houses at Field Bottoms estate.

Cleveland.—Arthur Robinson & Co. (Contractors), Middlesbrough, have purchased Drumranch Hall estate in Cleveland for building development.

Consett.—Nat. Coal Board to build pithead baths and canteen at Crookhall Colliery. Baths to be built next year and canteen later.

Daventry.—R.D.C. seek loan of £62,171 for 2 houses at Watford; 5, Braunston; 16, Long Buckley; 10, Staverton; 6, Kilsby; 4, Stowe-le-Churches; and 4, Everdon.

Derbyshire.—C.C. propose adaptations at "Brunswick Conference House," Buxton, at £8,500.

Dunston-on-Tyne.—Clayton & Davie, Ltd., ship-breakers, to extend their premises.

Gwyrfai.—R.D.C. to extend building of houses at Llanberis to 50.

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Hebden Royd.—U.D.C. propose 18 cottage flats and 4 houses at Banksfield and Mytholmroyd.

Hyde.—B.C. approved plans for: New extensions at Meadow-st. for Redferns Rubber Works.—Extensions at White Room, Newton Bank Printworks, for Calico Printers Association, Ltd.—Reconstruction of works and an additional storey at High Bank Mills, Chadwick-st., for Nelson & Co. (Labels), Ltd.—Offices, etc., at Ashton-rd. for Hyde Spinning Co.—Site for 2-form prim. and jun. school at rear of Smithy Fold-rd. for Cheshire E.C.

Lancs.—E.C. propose adaption of "Woodville," Longridge, as residential special school at £30,000. —Approved plans and estimate of £38,300 for proposed Ormskirk Bursclough Lordsgate Township Schools. G. Noel Hill, County A.

Leigh.—T.C. received consent to borrow £90,894 for 68 houses and 20 flats at Tamar estate.

Longbenton.—U.D.C. received sanction to build 30 houses at Fordley. Plans by surveyor, A. C. Sweeten, Council Offices, Forest Hall, Newcastle-on-Tyne.

Meriden.—R.D.C. approved draft layout for 125 houses and 4 shops, Nuneaton-rd., Arley.

Middleton.—B.C. approved extensions for Cromer Ring Mill, Ltd.

Morecambe.—B.C. propose replacement of conveniences at Central Prom. at £18,000.

Newcastle-on-Tyne.—Min. of Nat. Insurance to extend their hostel in Freeman-rd. to plans by M.O.W., Broadway West, Gosforth.—Couves & Partners, Carliol House, Newcastle, are architects for alterations in Hanover-st. for Newcastle Warehousing Co.

Northants.—C.C. propose health centre at Oxford-st., Wellingborough, at £50,000.

Northumberland.—C.C. included in its building programme plans for police houses at Wallsend, West Denton, Wideopen, Tweedmouth, Hexham, Bedlington, Whitley Bay, South Broomhill, Amble, Bellingham, Shiremoor and Lowick.—R. H. Duns, 6, Lambton-rd., Jesmond, Newcastle-on-Tyne, appointed quantity surveyor by C.C. for proposed Earsdon New County Prim. School. Site of 1½ acres to be acquired by C.C. in western development area of Blyth for proposed health centre.—Child welfare centres are proposed by C.C. at Haltwhistle, Morpeth, Whitley Bay and Newburn.

Nurses' home is proposed at Glanton and ambulance depots are to be built at Wideopen and Ashington.—County Planning Com. has had under consideration provision of houses for miners, etc., at Lynemouth Colliery. 250 acres may be used for erection of about 2,000 houses. County Planning Officer to prepare plans.—Site to be obtained at Newburn by C.C. for fire stn.—Home Office approval being sought for site at Alnwick for fire stn.

Nottingham.—T.C. propose 3 additional classrooms at Douglas Infants' School at £8,508.—Seek approval for phase 1 of sec. school between Bilborough-rd. and Hanslope-cres.

Oldham.—B.C. propose prim. school at Fitton Hill (1951).—Forwarded revised plans for central college of Further Education to M.O.E. for approval: Stage 1 at £250,000 (this year).

Plans submitted for: Warehouse at 3 and 5, King-st. for Oldham Industrial Co-op. Society, Ltd.—Canteen at Wrigley-st. for Carrier Engineering Co., Ltd.—Sanitary block at Royd Mill, Chamber-rd., for Lancashire Cotton Corporation, Ltd.—B.C. appointed Cameron & Middleton, Manchester, quantity surveyors for houses at Fitton Hill estate and adaptations at Greenbank Nursery.—Seek M.O.H. approval for crematorium at Hollinwood Cemetery.—Propose conversion of Walshaw Depot as maintenance workshop at £24,400.

Rochdale.—Hospital Management Com. propose adaptation of Law Nursing Home as chest clinic.

Runcorn.—U.D.C. approved plans for offices, store, etc., at Holloway for Runcorn and Widnes Industrial Co-op. Society, Ltd.—Amenity building at Castner Keller Works for I.C.I., Ltd.

South Shields.—T.C. to obtain tenders for warehouse at Riverside.—T.C. Planning health centre in Marsden-rd.

During next financial year, E.C. to include following in its building programme: Bilateral grammar and tech. school (second instalment); tech. college (first instalment); 6-form entry sec. school.—Revised plans by J. Wilks, 29, King-st., South Shields, for bilateral sec. boys' school (tech.) are being sent by E.C. to the M. of E.—Boro' E., John Reid, to prepare plans for conveniences at The Lawe.—T.C. to support application by Eskimo Slippers, Ltd., South Taylor-st., South Shields, to build factory.

Tenders to be obtained by T.C. for block of flats in Prince Edward-rd.—T.C. to consider £8,800 plan to convert former convalescent home into residential nursery.—J. S. Hubbard, 43, King-st., South Shields, is architect for factory addition at Templeton for Ford & Co.

South Shields.—Newcastle-on-Tyne Reg. Hospital Board, "Dunira," Osborne-rd., Newcastle-on-Tyne, has approved in principle proposed additions to South Shields General Hospital. Work will include extensions to X-ray department, provision of children's and physiotherapy department, modernisation and extension of main kitchen, provision of twin-operating theatre unit, and an ear, nose and throat unit. P. H. Knighton, M.B.E., A.R.I.B.A., Board's Chief A.

Stanley (Co. Durham).—U.D.C. to erect 10 shops and flats on South Stanley estate at £37,207. Surveyor, J. R. Heslop, Council Offices, Stanley.

Stretford.—B.C. approved plans for storage shed at Trafford Park-rd. for Liverpool Warehousing

Co., Ltd.—Extensions to workshop and office at Westinghouse-rd. for I.C.I., Ltd.

Sunderland.—Housing Com. agreed to build 200 more houses on Pennywell estate. Boro' E., J. E. Lewis.

Sunderland.—R.D.C. to modernise council houses at est. cost of £74,000. Direct labour. Surveyor, C. Emerson, Council Offices, The Esplanade, Sunderland.

Tynemouth.—Boro' E., 19, Howard-st., North Shields, to prepare new scheme for garage accommodation for cleansing and transport dept. in Hudson-st. and George-st.—W. Stockdale, 73, Howard-st., North Shields, is architect for extending factory in Tudor-ave. for Stella Building Products, Ltd.—Tasker & Child, Trinity-bldgs., 25, New Bridge-st., Newcastle, are architects for fish-oil factory in Union-rd., Tanners Bank, North Shields, for T. Irvin & Sons, Ltd.

T.C. propose new ambulance depot and fire stn.—T.C. approved in principle erection of hostels.—Housing Com. approved proposals for shopping centre at Marden North and Hartington-rd.

Warrington.—B.C. approved plans for extensions at Grappenhall Works for Richmonds Gas Stove Co., Ltd.—Factory at Hawthorne-st. for J. Tennant & Sons (Warrington), Ltd.—Warehouse, shop and offices at Haydock-st. for J. T. Clarke & Son.—Extensions to factory at Mersey Works, Arpley Meadows, for Thames Board Mills, Ltd.—Extension to garage and workshop at Warwick-rd. for Johnson Wilde & Co., Ltd.

West Riding.—C.C. propose adaptation of "Waterloo Manor," Garforth, and Gomersal House, Gomersal, as children's homes at £6,300 and £5,000 respectively.

Wirksworth.—U.D.C. received consent for 5 blocks of flats adjoining Derby-rd.

Worcs.—E.C. approved College of Further Education at Aggborough, Kidderminster.

Worsley.—U.D.C. propose further 463 houses and 14 shops. Surveyor, L. T. Broome.

TENDERS

* Denotes *accepted*.
† Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modification*.
¶ Denotes *accepted by H. M. Government Departments*.

Alsager.—12 houses at New Close estate, for U.D.C.: *J. & F. T. McEllin, Audley, £5,382, £2,591, £2,590 and £2,591.

Ashington.—Erection of a savings bank at Ashington, Northumberland. Architects, Marshall & Tweedy, Grainger House, Blackett-st., Newcastle: *T. Clements & Sons, Selbourne-gdns., Newcastle-on-Tyne.

Birkenhead.—12 police houses at Prenton-rd., for B.C.: *E. Thomas (Construction), Ltd., 74, Woodchurch-la., £16,730.

Caithness.—Plans have been prepared by the architects of the Corporation of Wick for the scheme at the East Banks housing site of 28 houses, for which they have accepted tenders from the undernoted contractors:

Excavation, brick, mason and allied works, McKin & Sutherland, Wick; joinery, carpentry and allied works, etc., Robert Thomson & Son, Ltd., Stonehaven; plumber and sanitary engineering works, etc., A. Sutherland, Wick; electrical fittings and installations, etc., Miller & Gait, Edinburgh; painting works, etc., F. & G. Baikie, Wick; slater and allied works, W. MacLean, South Fort, Leith; plaster, lathing and allied works, etc., W. MacKay & Son, Wick.

Cardiff City.—Six shops at Rumney, Ely and Fairwater housing estates, E. C. Roberts, City S. 12 shops at Rumney and Fairwater, *Gordon Contractors, £14,631 and £14,868; 6 at Ely, *S. N. Addicott, £14,889.

Carlisle.—Erection of 44 flats on the Chertsey estate, for T.C.: *Direct labour, £41,440.

Chesterfield.—8 houses at Sutton-cum-Duckmanton, for R.D.C.: *W. A. Evans, Calow, £10,521.

Dagenham.—54 flats at Whalebone-la., South, for R.C. A. E. Stickland, F.R.I.C.S., M.I.Mun.E., B.E. & S., Civic Centre Quantities by Harris Rourke & Simpson, 26, Soho-sq., W.1. *R. J. Minchin & Co., Ltd., Chigwell-rd., Woodford Green.

Darlaston.—Rebuilding of "All Saints" church, for Trustees. Architects, Twentyman & Percy, 2, Waterloo-rd., Wolverhampton: *E. Fletcher (Builders), Ltd., Cot-la., Kingswinford, £30,680.

Daventry.—20 houses at Flore, for R.D.C.: *C. J. S. Colbourne, Ltd., £24,980 (subject to M.O.H. approval).

Derby.—(a) 21 aged persons' bungalows at Wyndham-st., and (b) 19 aged persons' bungalows at Chaddesden Hall site, for C.B. Thos. W. East (F.), Boro' A., Council House. *Borough Building Dept., 839, London-rd., Derby, £19,258.

Derby.—110 houses at Mackworth estate, for C.B. Thos. W. East (F.), Boro' A., Council House. *H. J. Warner, Ltd., Station-rd. Works, Mickleover, Derby, £131,150.

Derbyshire.—Divisional police headquarters at Buxton, for C.C.: *F. Eve, Ltd., Buxton, £87,867. 2 Police houses at Darley Dale: *Smith, Hanwell & Son, Sheffield, £4,952 ,both subject to Secretary of State approval).

Derwent (Yorks).—Erection of 10 houses at Hemingbrough, East Yorks, for R.D.C. E. Vyvyan Hunter, 9, Minster-yard, York. Quantities by A. Stubbs, Coney-st., York:

J. H. Carr & Sons, Selby £15,568
Sq. W. Swift, Ltd., Portholme Works, Selby 13,404
*J. Yates (York), Ltd., The Grove, Osbaldwick, York... ... ... £13,068

Exeter.—Erection of St. Luke's secondary modern boys' school, Ringswell-ave., for T.C. H. B. Rowe (F.), City A., Municipal Office: *W. J. Channing & Sons, Ltd., Burnham-on-Sea, £123,949.

Fifeshire.—118 houses at Alburne Knowe, for the Glenrothes Development Corporation. Mr. Peter Tinto, A.R.I.B.A., architect, Development Corporation Offices, Glenrothes: *T. Livingstone & Sons, general contractors, St. Andrews, £166,599.

Glasgow.—Plans prepared for a Giffnick scheme of 16 houses which are to be erected on a selected site in The Wellfield-ave. area. Messrs. H. Ross & Partners, architects, 79, West Regent-st., Glasgow, W.C.2: *A. Mitchell & Sons, Ltd., Clarkston, Lanarkshire.

Glasgow.—416 flats at Milton, for Corporation. A. G. Jury, F.R.I.B.A., Director of Housing, 20, Trongate. *John Train & Co., Ltd., 30, George-sq., Glasgow, £601,418.

Glasgow.—61 flats for single persons, Calfhill-rd., Pollok, for Corporation. A. G. Jury, F.R.I.B.A., Director of Housing, 20, Trongate. *L. K. MacKenzie & Partners, Ltd., 304, Cathedral-st., Glasgow, £77,887.

Great Yarmouth.—Erection of second and major part of Beccles-rd. secondary modern girls' school, for C.B. F. Jackson (A.), Schools Architect, 15, Regent-st., Great Yarmouth. Quantities by Philip Pank:

D. Leighton & Son, Ltd., Lowestoft ... £130,368
R. G. Carter, Ltd., Norwich 129,993
R. H. Carter & Son, Ltd., Gt. Yarmouth 129,637
E. Moore & Son, Ltd., Great Yarmouth 124,821
*H. A. Holmes & Sons, Ltd., Gorleston 124,476

Inverness.—Contracts have been placed by the Northern Regional Hospital Board (Scotland) as follows: Hearing aid clinic at Royal Northern Infirmary; Animal House; and Transformer House at Raigmore Hospital. Architect, Lt.-Col. D. Polson Hall, A.R.I.B.A., Raigmore Hospital, Inverness.

Jarrow.—Extensions to the factory of Fusarc, Ltd., Jarrow. Architects, Cackett, Burns Dick & McKellar, 21, Ellison-pl., Newcastle: *Durham Garden, Ltd., Boldon-la., East Boldon, Co. Durham.

Lancs.—Works for C.C.: Erection of Ashton-under-Lyne county junior school, *J. Ridyard & Sons, Ltd., Ashton, £45,773; 3 additional classrooms at Widnes Wade Deacon grammar school for girls. *A. J. Kenright (St. Helens), Ltd.

Leek.—6 houses at Compton estate, for U.D.C.: *Tideswell Bros., Ltd., Basford, £9,602.

Lleyn.—Houses, for R.D.C.: 6 at Rhydyclafdy, *Mr. David Roberts, Llanor, £7,900; 8 at Trevor, *Mr. G. I. Hughes, Nevin, £10,912.

L.C.C.—Contracts exceeding £2,500 in value placed by L.C.C. during period ended August 1: Fabrication and delivery of pre-cast concrete and artificial stone floor and roof units for Old Palace School, Poplar, Liverpool Artificial Stone Co., Ltd. External painting of groups of flats at Kennington Park estate, Lambeth; Tabard-gdn. estate, Southwark, and Rockingham estate, Southwark, C. & T. Painters, Ltd.

External painting of Shrewsbury, Shuter, Stoddart and Wisden houses at Kennington Park estate, Lambeth (Group E), and Ellington, Whitworth and Wicksted houses at Rockingham estate, Southwark (Group Q), Wm. Winstanley & Co., Ltd. Erection of block 2 of flats and other works at Rodney estate, Southwark, A. T. Rowley (London), Ltd. Construction of a block of flats and other works on the Percival estate extension site, Finsbury, A. E. Symes, Ltd.

Erection of two blocks of flats and other works on the Edith Villas site, Fulham, William Moss & Sons, Ltd. Supply and erection of 50 Scottwood houses on a defined site at Aveley, Essex, Scottwood Factory Built Permanent Houses, Ltd. Construction of blocks 2, 4, 5, 6, 7 and 13 and other works on the St. Paul's Way site, Stepney, Stewart & Partners, Ltd.

Cleaning and painting at Shepperton-rd. school, Islington, F. G. Minter (Decorations), Ltd. Cleaning and painting at Latimer-rd. school, Hammersmith, Charles Berger & Son, Ltd. Rebuilding of the boundary wall at Princess-rd. school, St. Pancras, James Shackell & Co., Ltd.

¶London (Admiralty).—Particulars of contracts placed by Civil Engineer-in-Chief's Dept., Admiralty.—*Ford*: R.N.A.S., houses and site works, Warings (Contractors), Ltd., London-rd., Hilsea, Portsmouth.

¶London (Admiralty).—Particulars of contracts placed by Civil Engineer-in-Chief's Dept., Admiralty.—*Portsmouth*: *H.M. Dockyard*, re-roofing workshop, Ragusa Asphalte Paving Co., Ltd., 82, Queen's-rd., Brighton.

¶London (Air Ministry).—List of contracts to value of £500 or over for week ended July 29:—*Supply of Concrete Columns*: Concrete Utilities, Ltd., Ware, Herts. *Building Work*: Pochin (Contractors), Ltd., Middlewich, Cheshire; Thos. Lowe & Sons, Ltd., Hammersmith, W.6; H. J. Goodall & Son, Ltd., Basingstoke, Hants; R. Corben & Son, Ltd., West Borough, Maidstone; Sir A. McAlpine & Son, Ltd., Wolverhampton; Morlevs (Builders), Ltd., Derby; W. E. Chivers & Sons, Ltd., Devizes, Wilts; Sadler & Sons, Ipswich; G. E. Wallis & Sons, Ltd., Newquay, Cornwall; H. J. & A. Wright, Ltd., Great Missenden, Bucks; J. Dyer & Son, Weston-super-Mare. *Runway Work, etc.*: John McGeogh & Sons, Ltd., Kirkby, nr. Liverpool. *Maintenance Work*: Y. J. Lovell & Son, Ltd., Gerrards Cross, Bucks.

¶London (M.O.W.).—Contracts placed by M.O.W. for week ended July 29.—*London*: Queen Anne's Mansions, S.W.1, internal painting, C. & T. Painters, Mordaunt-rd., N.W.10; South-Eastern District Office, Borough High-st., S.E.1, alterations and provision of canteen, Geo. Parker & Sons, Ltd., 134, Sumner-rd., S.E.15; Employment Exchange, Holbeach-rd., Lewisham, alterations and additions, A. Roberts & Co., Ltd., 79, Eccleston-sq., S.W.1; Branch Post Office, 1-2, Onslow-parade, Southgate, alterations and additions, Wm. Shumur & Sons, Ltd., Riverside Works, E.5; Somerset House, rebuilding of river wing, G. E. Wallis & Sons, Ltd., 231, Strand, W.C.2. *Glamorganshire*.—Treforest, erection of automatic telephone exchange, E. Turner & Sons, Ltd., Penarth-rd., Cardiff. *Gloucestershire*: Tog Hill, Bristol, erection of telephone repeater station, Stone & Co. (Bristol), Ltd., Redland-rd Bristol. *Lancashire*: Clarksfield Mod. Sec. School, Oldham, erection of temporary school buildings, T. G. S. Smith, 194, Yorkshire-st., Rochdale. *Middlesex*: Victoria Hall, Victoria-rd., Feltham, alterations, repairs and decorations, R. E. Spooner, Ltd., Staines-rd., Ashford.

Monmouthshire: I.R.O., Charles-st., Newport, adaptations, Wm. Edwards, Temple-st., Newport. *Northumberland*: Employment Exchange, Newburn, general adaptations, J. H. Fisher & Co. (Newcastle), Ltd., Kenton-la., Kenton, Newcastle-on-Tyne. *Somersetshire*: Pridgwater, erection of 8 houses, W. J. Channing & Sons, Ltd., Highbridge-rd., Burnham-on-Sea.

¶London (War Dept.).—Works contracts placed by War Dept. for week ended July 29.

Notts: Building work, T. & E. Warrington (Hyde), Ltd., Manchester. *Yorks*: Miscellaneous work, W. G. Birch (Harrogate), Ltd., Harrogate. *Cumberland*: Road work, The Apex Asphalters, Ltd., Stockport. *Warwickshire*: Miscellaneous work, J. E. Woodward (Contractor), Ltd., Leamington Spa. *Staffs*: Miscellaneous work, C. Linnecor & Son, Ltd., Birmingham. *Derbyshire*: Miscellaneous work, O'Dair Bros., Ltd., Stoke-on-Trent. *Worcestershire*: Miscellaneous work, Biddulph & Thrift, Ltd., Wolverhampton; building work, T. Oliver, Worcester; building work, Edgar Crowder, Ltd., Birmingham. *Devon*: Miscellaneous work, S. J. Baker, Exmouth. *Hants*: Painting, A. McDermott, Bradford. *Co. Tyrone*: Miscellaneous work, J. Crawford & Son, Londonderry. *Co. Down*: Miscellaneous work, H. Cole, Newry. *Co. Antrim*: Miscellaneous work, J. Miskimmin & Sons, Ltd., Belfast. *Inverness-shire*: Miscellaneous work, A. & H. Chisholm, Inverness. *Co. Down*: Miscellaneous work, McKinney & Co., Ltd., Tandragee, Armagh.

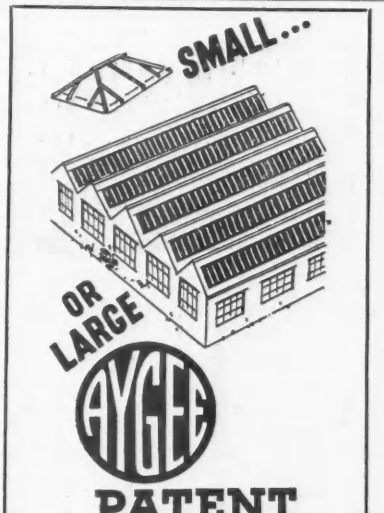
Manchester.—Works at Woodhouse Park and Moss Nook Neighbourhoods, for T.C: 38 shops, 38 flats and 38 garages, *Hampson & Kemp, Ltd., Manchester; 157 houses, *H. Boot & Sons, Sheffield (subject to M.O.H. approval); 22 houses, *H. Jones, Stockport (subject to M.O.H. approval).

Newcastle-on-Tyne.—Erection of 16 dwellings for old people at Longbenton, Newcastle: J. H. Greenwell & Co., builders, Whitley Bay.

Newcastle-on-Tyne.—122 houses on the Montague estate, Newcastle: *Cussins (Contractors), Ltd., Jesmond, Newcastle-on-Tyne.

Newcastle-on-Tyne.—Restoring part of Hexham Abbey: *J. & G. Lowry, Corporation-st., Newcastle.

Newcastle-on-Tyne.—Erection of a Savings Bank at Denton Burn, Newcastle-on-Tyne. Architects,



Marshall & Tweedy, Grainger House, Blackett-st., Newcastle; *Middlemiss Bros., Stepney Bank, Newcastle.

Newcastle-on-Tyne.—12 shops and flats on the Montagu estate, Newcastle-on-Tyne: *J. E. Gardiner, Ltd., Cuthbert-st., Gateshead.

Newcastle-on-Tyne.—Erection of 20 shops and flats on Unit 3 of the Longbenton housing estate, for T.C. City A., George Kenyon, 18, Cloth-market, Newcastle-on-Tyne: *W. H. Oliver, Ltd., 308, Shields-rd., Newcastle-on-Tyne, £63,888.

Newcastle-on-Tyne.—Erection of six police houses in Balliol-gdns., for T.C. G. Kenyon, City A., 18, Cloth-market, Newcastle-on-Tyne: *Wilkinson Bros., 205, High-st., Gateshead.

Newcastle-on-Tyne.—Erection of 128 houses on section "F" of Montagu estate. George Kenyon, City A., 18, Cloth Market, Newcastle-on-Tyne, 1. *Cussins (Contractors), Ltd., Moor Court, Newcastle-upon-Tyne, 3, £152,340.

Northumberland.—Erection of four police houses and garage at Cramlington, for C.C.: *J. H. Greenwell & Co., Ltd., Hill Heads-rd., Whitley Bay.

Otley.—Erection of 20 houses and construction of road and drainage works on May Lea estate, for U.D.C. Surveyor, Council Offices, North-parade, Otley: *Harrison Builders (Pudsey), Ltd., Pudsey. £27,368.

Sawbridgeworth.—Five pairs of houses and 2 pairs of bungalows, for U.D.C. Architects, Culpin & Son, 3, Southampton-pl., W.C.1. Quantities by Dearle and Henderson, FF.R.I.C.S.

C. & F. Bryen, Ltd., London, N.6	£24,600
N.H. Builders, Ltd., Bishop's Stortford ...	22,835
James Whiffen & Son, Ltd., Epping, Essex	21,923
J. A. Elliott, Ltd., Bishop's Stortford ...	20,293
Horn Construction Co., Ltd., Grays, Essex	19,000
Helmer & Dyer, Ltd., Sawbridgeworth ...	18,949
J. L. Glasscock & Sons Succrs., Bishop's Stortford	18,840
Lee (Builders), Ltd., Stanstead Abbotts...	18,780
S. & G. Peachey & Sons, London, E.4 ...	18,688
N. J. Lawrance, Sawbridgeworth	18,066
Leyford, Ltd., Bishop's Stortford	17,754
*W. J. Reeves (Bishop's Stortford), Ltd., Bishop's Stortford	17,642

Southampton.—Health clinic, Cobden-ave, for C.B.: *John Lewis Building, Ltd., 41, Portland-ter., Southampton, £9,066.

South Shields.—Erection of 66 bungalows on the Marsden-rd. estate and 52 houses at Simonside, for T.C. John Reid, Boro' E.: *H. E. Pitt, Ltd., Leopold-st., Millfield, Sunderland.

Startforth (Yorks).—Erection of 10 houses at Cotherstone, for R.D.C. Architect, H. B. Richardson, Skinnergate, Darlington: *Boddy & Bell Thomas-st., Darlington.

Sunderland.—26 houses, for Housing Comm.: *R. Cubitt, Sunderland.

Wakefield.—Houses, for B.C., at Eastmoor estate: 100, *F. Duncan Mann & Sons, Ltd., 33, Dolphin-la., Thorpe; 25 blocks of Gregory flats, *W. Dunk & Sons, Ltd., Peel-st., Burnley.

Warrington.—22 houses at Poplars Farm estate, for B.C.: *W. A Howard, Ltd., Warrington, £25,445.

Wellington.—10 houses, Bennett's Bank, for U.D.C. A. G. Barton, M.I.Mun.E., E. & S.: *Hereward E. Holder, Windmill-la., Wightwick, Wolverhampton, £13,977.

West Bromwich.—142 houses, flats and maisonettes at Hateley Heath estate, for B.C.: *Wm. Kendrick & Sons, Ltd., Tasker-st., Walsall, £153,095.

Whitley Bay.—Erection of 36 houses on the Foxhunters' site, for U.D.C. E. Roberts, surveyor: *J. Urpeth, Moorland-ave., Bedlington Station, Northumberland, £44,514.

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